

HIGH-QUALITY OF LIFE INITIATIVES OF BRUNEI

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Abstract: High-quality of life is one of the priority areas of Brunei because the country views it not only as an indication of advancing human and economic growth and development but it prevents or combats poverty. To this end, this book chapter presents Brunei's social interventions and impacts on achieving high-quality of life *vis a vis* SDGs 1, 2, 7, 8, 9, and 13. Brunei has comprehensive approach of improving the quality of lives of its populace because of collaborations and cooperations among relevant government agencies and the private sector. With this broad-based approach, carefully designed initiatives which positively impact the well-being of the population and economy of Brunei have been rolled out and they are yielding some desired results. An example being the well-established national welfare system whose effectiveness has rendered Brunei as a country with not absolute poverty. The welfare system in conjunction with the Brunei's whole-of-nation approach, the economy is being stimulated for continued improvement in the well-being of the populace. For this to be achieved sustainably, Brunei needs intensify its economic diversification drive particularly for the agricultural and manufacturing sectors as although these sectors could serve as important engines of the country's economic growth, their full potentials are yet to be realized. Thus, expanding the ongoing high value-added downstream activities to increase the existing small domestic market could boost the adoption of the digitalization and climate-resilient agenda in a sustainable manner. Furthermore, rapid digital literacy, retooling, skill alignment, re-skilling, upskilling, and diffusing the ongoing digitalization and climate resilience activities into the traditional sectors, small businesses, and the labour market of Brunei are essential. With this approach, more of the dependants on the national welfare system and other interventions could be weaned or emancipated to become self-reliant to enable them to give back to the society.

Keywords: Poverty alleviation, needy, social intervention, human development, environment, economic growth, export orientation, agricultural technologies

1.0 INTRODUCTION

In the early 1920s, equitable distribution of Brunei's wealth was sustained by the agricultural, fishery, and forestry sectors because they were the main drivers of its economic growth and development (Siddiqui *et al.*, 1996). In those years, the agricultural, fishery, and forestry

sectors contributed approximately 50 percent of the total number of the working force in Brunei. However, following the oil and gas discovery in Brunei, the converse was true. The new back then fortune took the major share in developing the socio-economic growth and development of Brunei to the extent that the improved quality of life of Bruneians through Brunei's social interventions including digitized welfare systems/assistance, subsidies, incentives, free medical and health care, free education, tax free personal income to name a few significantly improved the country's existing quality of life. This success was underpinned by the infusion or interplay of the human development, freedom and capability, multi-dimensional, and Islamic concepts of poverty and inequality eradication. An example on how Brunei's oil and gas boom in commercial quantities (Siddiqui *et al.*, 1996) rapidly marginalized the relevance and dominance of the agricultural, fishery, and forestry sectors was that most players in the aforementioned sector transitioned to the more rewarding oil and gas industries to the extent that majority of the then full-time farmers, fishermen, and foresters in the agricultural, fishery, and forestry sectors joined the oil and gas industries whereas some of the remaining farmers and fishermen became part-timers who relied on low skilled migrant workers. This trajectory negatively impacted the sustainable food security of the country. The seriousness of the effects of the exodus led to the introduction of new policy interventions in the agricultural and fishery sectors such that self-sufficiency levels (SSLs) for eggs and broilers have currently been achieved (Department of Agriculture and Agrifood, 2024) whilst 94.60 percent and 80.10 percent SSLs for day old chicks and fertilized eggs, respectively have been reported (Department of Agriculture and Agrifood, 2024). Unlike the poultry and fishery (88.89 percent SSL) sectors whose productions are progressing towards 100 percent SSLs, with the exception of the tropical vegetables sector with a modest SSL of 72.70 percent, the crops, cattle, sheep, and goat sectors are trailing (Department of Agriculture and Agrifood, 2024). This is perhaps related to the slow rate of adopting the emerging agricultural technologies in addition to the dwindling interest of the youth in the primary production sectors which are dominated by the aged farmers. The current rice SSL is approximately 8.10 percent and this achievement for a national staple food of this kind is alarming (Department of Agriculture and Agrifood, 2024). Among the pressing issues impeding the significant progress in the rice security appears to be low level of the youth willingness to succeed the aging paddy farmers. Notwithstanding the challenges confronting the agricultural sector particularly the crop sector, the overall agricultural gains are encouraging because from 2019 to 2023 (Department of Agriculture and Agrifood, 2024), the gross output value of the agricultural and agrifood sector increased by 28.60 percent and the major contributor was the livestock sector (Including the poultry sub-sector). It contributed 57 percent of the total gross output of the agriculture and agrifood sector, followed by the agrifood sector (30.70 percent), and crop sector (12.30 percent) (Department of Agriculture and Agrifood, 2024).

Unlike the agricultural and fishery sectors whose positive socio-economic impact in relation to poverty alleviation, job creation, and worker incomes manifest gradually, the positive side of the oil and gas industry is that it rapidly improved the socio-economic status of Bruneians through for example, the industrialization drive of the country although the challenge has been and continues to be on the sustainability of the economy *vis a vis* the world-wide oil and gas price volatility. This uncertainty is being abetted through creating enabling environment for Brunei to achieve high and sustainable economic growth, diversified economy, stable macroeconomic, human capital development and skill alignment, low unemployment rate, sustainable food security through adopting contemporary methods and technologies, poverty alleviation, export-orientation *via* high value industrialization approach, labour productivity, GHG mitigation, and many more (Ministry of Finance and Economy, 2020). Hence, the country's vision 2035 serves as a catalyst in terms of: (i) Transforming Brunei's populace into

a world class educated, highly-skilled, and accomplished people, (ii) Ensuring that the country is rated among the top ten nations in the world with high quality of life, and (iii) Establishing dynamic and sustainable economy such that Brunei's per capita income is among the best countries in the world (Ministry of Finance and Economy, 2020). The focus of Brunei to achieving sustainable high-quality of life (Goal 2 of Brunei Vision 2035) is consistent with the country's ability and capacity to achieve the SDGs on poverty, education, and health before the 2015 deadline (Department of Economic Planning and Development, 2010; Hab, 2015) although achieving self-sufficient food security (SDG 2) in a sustainable manner remains a challenge in Brunei. Apart from aspiring to be recognized among the first ten countries with high-quality of life in the world, through its Vision 2035 Brunei is looking forward to achieving zero poverty by 2035. This corroborates the allocation of significant funds in all of the countries developmental plans for achieving high-quality of life. To this end, this book chapter presents Brunei's social interventions and impacts on achieving high-quality of life initiatives *vis a vis* SDGs 1, 2, 7, 8, 9, and 13.

2.0 THE CONTEXT OF POVERTY AND POVERTY ALLEVIATION IN BRUNEI

According MOFE (2020a), Brunei has been successful in combating extreme poverty because executing social interventions which empower women, youth, low-income earners, among others. This enables the vulnerable to actively participate in the economic growth and development of the country. The social intervention programmes (For example, infrastructure; amenities; subsidized education, medical services, housing, food stuffs, agricultural inputs; temporary assistance for the needy; social security; food stamps; tax credit; and many more) and industrialization (Kenworthy, 1999; Abuelheiga, 2019) of Brunei have proven to be effective in reducing or preventing poverty. Brunei is more to sustainable improvement of the quality of the lives its citizenry than focusing more on income poverty alleviation (Brunei Vision, 2019; Gweshengwe et al., 2019). So are the capability programmes such that entrepreneurs in the country are playing important role in combating or alleviating poverty because they enable entrepreneurs particularly the youth not only to be independent *via* putting into practice knowledge and skills gained for example, establishing viable businesses for earning personal income but the programmes also urge the entrepreneurs to create more jobs for the country (Hassan et al., 2024; Blattman et al., 2019; Cho, 2015).

According to Hassan et al. (2024), Brunei does not have official poverty line but it appears the country indirectly uses income to determine the eligibility of a household monthly financial support. However, the country has a deprivation marker in the form of an income indicator to measure whether a household is entitled to monthly financial support. Brunei Department of Community Development and Brunei Islamic Religious Council uses income thresholds to determine who a needy is (Hassan et al., 2024). The Department of Community Development defines those in need as households having an income less than the Minimum Cost of Basic Needs by drawing on the Organization of Economic Cooperation Development (OECD)-modified scale as because inflation adjusted amount approach of this kind takes into account households expenditure of Bruneians (Hassan et al., 2024; The Scoop, 2020a). The estimation is done by the designated authorities who make it mandatory for the disadvantaged to have email address, or smart phone, or *via* a computer for accessing the country's welfare system online (Hassan et al., 2024; MOFE, 2020b).

3.0 POVERTY OR QUALITY OF LIFE?

Brunei prefers using the phrase “quality of life” to “poverty” because of the connotation of poverty. The society believes that the poverty negates self-confidence or self-esteem (Gweshengwe et al., 2020). Gweshengwe et al. (2020) revealed Brunei views on quality of life as a society which is for example, adequately educated, highly skilled, healthy, secured, the populace co-exists in peace and harmony yet the society positively participates in the socio-economic progress of the country. Gweshengwe et al. (2020) further pointed out the description of high-quality of life by Bruneians is related to the concept of basic needs and capability such as being able to afford basic needs, financial security, job security, good education, lucrative job, comfortable life, and good health. Thus, terms such as ‘living in need’, ‘difficult life’, and ‘needy people’ are used in Brunei instead of “poverty” (Gweshengwe et al., 2020). Nonetheless, Brunei has been consistent with its zero poverty drive as attested in its development plans 9 (2007 to 2012), 10 (2013 to 2017), and 11 (2018 to 2023). Consequently, the country’s ability to achieve the SDGs targets on poverty, education, and health. The approach of Brunei in alleviating poverty and inequality is broad based because it is rooted in the country’s Whole-of-Nation concept. Although matters on poverty and its alleviation are under the jurisdiction of the Brunei National Council on Social Issues, it works in tandem with agencies such as Ministry of Culture, Youth, and Sports (MCYS), Ministry of Finance and Economy (MOFE), Ministry of Home Affairs (MOHA), Ministry of Religious Affairs (MORA), Ministry of Education (MOE), Prime Minister’s Office (PMO), and Sultan Haji Hassanal Bolkiah Foundation (YSHHB) (Hassan et al., 2024).

Being an Islamic country, Brunei subscribes to the Islamic concept of poverty because Islam considers poverty society as a threat to society. As such, it must be collectively prevented or combated by leaderships and the led (Who are relatively well to do). Islam emphasizes not only on providing sufficient basic human needs (Example, shelter, food, clothing and other necessities) to the needy but this noble course should be sustainable to the extent that it preserves the dignity of the needy. Islam categorizes the needy or the poor into two: (a) Those who do not have sufficient resources to meet their daily needs throughout the year and (b) the destitute or extreme poor who are unable to sustain their needs for even a day. To this end, the Islamic Religious Council of Brunei groups the needy as destitutes whose incomes are less than half of what is sufficient to meet their basic needs and poor as having income ranging between one half and the basic needs threshold (Gweshengwe & Hassan, 2020).

4.0 BRUNEI’S QUALITY-OF-LIFE INITIATES

The welfare system of Brunei is comprehensive because of the country’s policies and action plans which ensure that any shade of poverty is effectively solved. Besides supporting the needy, the country’s digital National Welfare System ensures efficiency and encompassing such that no poor or needy or underprivileged being them recipients and their dependants are not left out (Hassan et al., 2024; MOFE, 2020a).

4.1 Digitized Centralized Welfare Systems of Brunei

Under MCYS, social protection schemes such as pensions, medical and health care, education, housing, allowances, subsidies to name a few are some of the ways of dealing with poverty in Brunei (Prime Minister’s Office, 2023; Hassan et al., 2024). These initiatives are facilitated through the Special Committee on Poverty Issues, Brunei which is steered by the National Council on Social Issues, Brunei. The implementation is guided by the Poverty Eradication Action Plan of Brunei. It assists low income and vulnerable families and individuals such as

dependent children in addition to assisting the needy to break the poverty cycle. Apart from alleviating poverty, the Poverty Eradication Action Plan, Brunei protects Bruneians through empowerment. This is done to enable the less privileged escape from poverty entrapment.

The integrated and digitalized welfare system of Brunei which ensures efficient application and distribution of financial assistance called the National Welfare System centralizes the country's welfare schemes. This welfare system is improving information sharing and welfare programmes in Brunei, especially among the Monthly Welfare Assistance scheme applicants of Brunei Community Development Department or Brunei Darussalam Islamic Religious Council (Prime Minister's Office, 2023). Moreover, the system has absorbed Brunei's Annual School Needs Assistance which used to be operated by the Ministry of Education, Brunei. The assistance provides school coupons for low-income families. The digital system captures applicants' background, family members, assistance needed, among others. Also, it displays recipients' map for analysis and line of action. Some of the actions are solving unemployment matters, getting stable job, and assisting skills development for self-reliance. Because the digital system aligns and allocates assistance for the needy or the vulnerable, it streamlines inter ministerial processes in addition to serving as a platform for effective assessment and validation of activities (Prime Minister's Office, 2023). During the COVID-19, the system was used to process several interventions one of which was short-term financial assistance for the public and private workers in the sectors affected by COVID-19. Currently, the system has integrated applications for in-kind educational assistance from the Ministry of Education, Brunei (Prime Minister's Office, 2023).

Being an Islamic country, the distribution of zakat to the underprivileged by the Brunei Darussalam Islamic Religious Council monthly and it is done for two years, after which the recipient re-applies for re-assessment (Hassan et al., 2024). Although zakat recipients commonly receive monthly financial assistance, the assistance is extended to for example, basic subsistence, house rental, and education needs. Also, it is awarded for larger, one-off payments to finance house repairs, construction or purchase, business capital, medical treatment, or for periodic costs for stationery and books in preparation for a new school term or year (Hassan et al., 2024). Community Development Department, Brunei also provides Monthly Welfare Assistance to supplement the income of the needy to protect them from being poorer and poorer (Hassan et al., 2024). Recipients under this department are assessed yearly for eligibility (Hassan et al., 2024).

4.2 Non-financial welfare programmes (Training and empowerment)

Although the Monthly Welfare Assistance which adds on to the existing income of the needy appears the most subscribed programme, the government of Brunei provides food rations, daily basic necessities, shelter, and grants for establishing businesses (MOFE, 2020a). Moreover, the Employment Plan Programme of the country collaborates with companies for providing jobs and skills development among which the needy benefits (Hassan et al., 2024). In addition, the Community Empowerment Programme, Brunei provides up-skilling, re-skilling, or skill alignment relating to the capabilities and interests of participants whereas the Micro-grant for Empowerment programmes provides financial assistance to single mothers and low-income groups for stimulating or instilling sense of self-employment and entrepreneurship (Hassan et al., 2024). The programme on Business from Home develops housewives' entrepreneurial skills and the Visionary Youth Innovation Programme educates and promotes visionary resilience of young adults aging between 16 years and 21 years old. Unlike the MCYS socio-

economic interventions, the Brunei Islamic Religious Council approaches entrepreneurship and employment for the poor or needy *via* their Asnaf Zakat Empowerment Programme which develops the skills and creativity of the poor or needy for them to become prosperous such that they are able to give back to the society through for example, contributing to the zakat pool which assisted them to scale their poverty cycles (Hassan et al., 2024).

5.0 EMPOWERING THE NEEDY

In ensuring that sustainable benefits positively impact lives, causes lesser dependency on Brunei government's support as the main source of livelihood, and sustaining fiscal capacities, Brunei develops talents or skills for entrepreneurship, self-development, among others. It is in this light that the revised National Plan of Action on Poverty Eradication 2020-2024 of Brunei emphasizes on the following areas (Prime Minister's Office, 2023):

- (i) *“Capacity, Access and Opportunities to Generate Income through strategies on employment, entrepreneurship and skills training*
- (ii) *Capacity and Access to Education through strategies on education and mindset change*
- (iii) *Infrastructure Policies, Legislation and through strategies on policy, legislation and guidelines, finance, housing, transportation and childcare support”*

Apart from free medical and health, Bruneians enjoy free education in public schools but at the tertiary level, scholarships are provided to its citizens to pursue further studies nationally and internationally. Another approach towards breaking the poverty cycle is supporting education of the needy and their dependents. An example being the Rifah Scholarship Scheme which is given by the Department of Islamic Studies, Brunei to needy students to pursue higher education nationally and internationally levels (<https://borneobulletinyearbook.com.bn/welfare/>). In terms of retirement, the Employees Trust Fund and Supplemental Contributory Pension schemes have been replaced with the National Retirement Scheme which is a more secured retirement because it provides retirees higher monthly retirement income. With the current retirement scheme, a member contributes *via* his or her salary from which he or she is permitted to use for pre-retirement needs whereas employer contribution serves as the retirement income (<https://borneobulletinyearbook.com.bn/welfare/>).

5.1 Housing

Brunei provides affordable and quality housing. This scheme which started in 1970s by Brunei government to date provides the opportunity for Bruneians own home. The housing programme is managed by the Housing Development Department of the Ministry of Development, Brunei but this national housing scheme is financed by the development projects which are specified in the country's development plans (Prime Minister's Office, 2023). Moreover, the national housing programme constructs low-cost houses on the government of Brunei land with infrastructure for low-income Bruneians to leave a quality life. This is another avenue to further relief families with low- income accommodation needs or those in need of accommodation but are unable to do so. Brunei's housing programme including special housing projects such as temporary housing for urgent need by the poor and the underprivileged under the purview of the MCYS and Yayasan Sultan Haji Hassanal Bolkiah Housing Scheme are collaborated by Prime Minister Office, Ministry of Religious Affairs, Ministry of Development, Ministry of Home Affairs, and private sectors (Prime Minister's Office, 2023). The government of Brunei

extends accommodation assistance to the poor or needy in Brunei *via* the country's affordable housing programme (Hassan, 2017; Hassan & Yong, 2019) one of which is The Sultan Haji Hassanal Bolkiah Foundation which is reputed for its projects for the underprivileged by providing emergency support for victims of natural disasters, affordable accommodation, micro-financing scheme and entrepreneurship training, and medical and health care support (MOFE, 2020a). Many houses have been constructed under the National Housing Scheme and Landless Indigenous Citizens Housing Scheme for Bruneians. To reduce total dependence on the government, the Housing Development Department is exploring alternatives such as analysing alternative financing through public-private partnership or sukuk, a proposal for a developer's scheme, or the optimisation of abandoned or empty houses (<https://borneobulletinyearbook.com.bn/welfare/>).

5.2 Non-Government Organizations participation

Apart from the government of Brunei's efforts in providing quality of life to its citizens, several Non-Government Organizations (NGOs) in the country are contributing to the upliftment of the socio-economic status of the disadvantaged. The notable NGOs are Big Begawan Project (Big BWN), Brunei Council on Social Welfare, and Society for Community Outreach & Training (SCOT). Since 2015, Big BWN has been providing economic opportunities to Bruneian communities, youth, entrepreneurs, and women their national initiatives and campaign programmes. With its community empowering initiatives, Big BW has executed national and international campaigns one of which is their environmental awareness for support Bruneian small businesses and women entrepreneurs (Prime Minister's Office, 2023). Moreover, Big BWN is actively involved in youth capacity building (Entrepreneurship and capability skills) in diverse fields of expertise. An example is the Kg Bolkiah Community Development Centre which hosts entrepreneurship training programmes for improving communities' socio-economic well-being, among other related activities. Their initiatives have churned out several accomplished small businesses owned by women in their localities. Also, the Big BWN outreach programmes have improved the socio-economic well-being of several members of the Bolkiah Ladies Club (Prime Minister's Office, 2023).

Unlike the Big BWN project, the mandate of Brunei Council on Social Welfare dating 2009 mission is: *"to render assistance to needy residents of Brunei such as directing and assisting eligible families to get welfare assistance provided by the government, giving temporary assistance to eligible families who are waiting for government welfare, assisting needy students in their schooling finances, providing basic necessities to deserving families on a monthly basis, and running programs that empower the need to break the poverty cycle"* (<https://mkmbornei.org/about-us/>). Additionally, this NGO *"assists those in temporary difficulties such as the death of a breadwinner or where the breadwinner runs foul with the law and is imprisoned, fire victims, and victims of natural disasters"* (<https://mkmbornei.org/about-us/>). Among its programmes are School Breakfast, Staple Food Assistance, Education Fund, Brunei Needy Fund, and many more (<https://mkmbornei.org/>). The School Breakfast scheme collaborates with primary schools to find needy primary school students who go hungry at school after which this NGO pays for the food and drinks of the needy students at their respective school canteens. The Staple Food Assistance scheme provides monthly staple food to identified needy families. This assistance continues until their predicament it is eradicated. The Education Fund assists students in needy families through paying for their school fees, transportation, and other needed accessories such as laptops computers for students pursuing for example, tertiary education. The Needy Brunei Fund takes care of the living needs of needy

families for rentals, repairing accommodation, sending members of needy families to courses (Example, computer, farming, cooking, tailoring, baking) for empowerment, micro financing to embark on income generating activities, and so on. In a nutshell, the Brunei Council on Social Welfare highlights or identifies and solve social welfare matters such that the social well-being of the underprivileged or needy are significantly improved. Thus, Brunei Council on Social Welfare programmes primarily provides sustainable financial support to the needy to ensure that they get off the hook of the poverty cycle (<https://mkmbbrunei.org/>). Besides nurturing the self-empowerment of the underprivileged, the programme ensures that the children of the needy parents are well educated to curtail the perpetuation of the family's socio-economic predicament. The assistance of Brunei Council on Social Welfare has been extended to some of the needy families in Malaysia, Indonesia, and Bangladesh (<https://mkmbbrunei.org/>). The Brunei Council on Social Welfare programmes are based on the concept of combining charity and self-empowerment in relation to entrepreneurship, education, and employment, a specific example being establishment of businesses through conducting short courses which are related to businesses, attitudinal change, and purchasing equipment support (<https://mkmbbrunei.org/>). In the case of sustainable poverty alleviation stimulation in Brunei, the Society for Community Outreach & Training (SCOT) which was conceived in 2011 contributes to achieving this goal because it serves as a conduit for churning sustaining avenues and means of assisting the needy. Their approach provides resources, basic skills, and other supports to sustainably fix the needs of the poor. An example is their youth programme called Youth Against Poverty which stimulates the youth's interest and knowledge on matters related to poverty in Brunei (Prime Minister's Office, 2023). Among their initiatives are "Learning Journey" in the form of community visits to enable participants understand the living conditions and situations of the needy and "Focus Group Discussions" on project ideas which could benefit the needy following implementation.

6.0 BRUNEI YOUTH ENTREPRENEURSHIP ECOSYSTEM INITIATIVES

As the saying goes, "the future belongs to the youth". To this effect, Brunei is unearthing the hidden talents of its youth in different areas of human endeavour among which is human capital and shared responsibilities of the populace. In relation to this, Brunei has developed several ecosystems one of which is relevant to this book chapter is the national Youth Entrepreneurship Ecosystem (Darussalam Enterprise, 2023). This ecosystem has several segments or components as discussed subsequently (Darussalam Enterprise, 2023).

6.1 Human capital building

Capacity building and shared services as of the components the Youth Entrepreneurship Ecosystem has BusinessBN (Whole-of-government service) which provides businesses with the needed information as one stop centre (Single portal) on government services and reforms for engaging in business in Brunei (Darussalam Enterprise, 2023). The agriculture and fisheries business matching are under the jurisdiction of the MPRT, Brunei. Also, there are business management templates which entrepreneurs (Start-ups, mico, and small businesses) could use for writing business plans, financial management, interviews, issuing employment contracts, and performance management. The Brunei Innovation Lab (BIL) stimulates the establishment

of Brunei's technology ecosystem which is capable of grooming the country's startups such that they are able to provide solutions based on advanced technologies/innovations to solve real-life problems in addition to capitalising on emerging markets (Darussalam Enterprise, 2023). The business support centre is the place for businesses to get business advice and matters on business-related processes. Under the capacity building and shared services is Brunei Mentors for Entrepreneurs Network (BMEN). It is a voluntary national network which assembles accomplished business mentors such as entrepreneurs, industry experts, professionals, and academicians to share their knowledge, experience, and mentor growing businesses (Darussalam Enterprise, 2023). Brunei Shell Petroleum (BSP) has developed Energy Business Academy 1.0 and 2.0 where the Energy Business Academy 1.0 which is a vendor development programme targets indigenous startups and small businesses which are interested in going into the Oil and Gas business whereas the Energy Business Academy 2.0 enhances indigenous businesses' competencies and capabilities for them to remain viable in the complex business opportunities BSP offers (Darussalam Enterprise, 2023). Mentor With Us brings together business owners and business mentors *vis a vis* their business needs. This is to neutralize networking challenges amongst indigenous business owners and business mentors. Support of the business mentors spurs the growth and development of the indigenous SMEs. Industry Business Academy (IBA) provides businesses with the needed knowledge for starting, growing, and exporting goods and services. Micro Bootcamp assist individuals with business ideas to start the business journey *via* learning fundamentals of doing business whereas the accelerated Accelerate Bootcamp enables early-stage businesses to grow using technology, raising investment, and building innovative business models (Darussalam Enterprise, 2023). The LiveWIRE Masterclass dwells on entrepreneurship and digitalization whereas the LiveWIRE Higher Institutions Entrepreneurship Programme enhances higher institutions students' entrepreneurial knowledge and skills in the form of LiveWIRE workshops one of which is Bright Ideas and Business Plan Series. Upon successful completion, they are encouraged to join the Business Awards for a possible rolling out of their business idea (Darussalam Enterprise, 2023). LiveWIRE Brunei Bright Ideas raises awareness of self-employment and entrepreneurship as a realistic option among unemployed Bruneians aged between 18 and 40. LiveWIRE Becoming a Successful Owner Manager (BSOM) is a workshop where Shell LiveWIRE Brunei invites guest speakers to talk about specific topics within their expertise on running a business in Brunei (Darussalam Enterprise, 2023). YDC Lights on promotes entrepreneurship among those who have the potential to start their own businesses through educating them on the fundamental business skills, training, and practical experience on how to run their business.

6.2 Financing facilities

In terms of finance, Bank Usahawan (Entrepreneur) offers Syariah-compliant financing products such as Asset Financing and Working Capital Financing for MSMEs so are other banks in Brunei except that the other banks give financial facilities to corporate businesses too. Furthermore, there is a Co-Matching Scheme which makes available grants to businesses with Starting Up or Expansion costs not more than BND20,000.00 (Darussalam Enterprise, 2023). With this scheme, a business co-matches at least 30 percent of the total project amount whereas not more than 70 percent of the balance is financed by Darussalam Enterprise (DARe), Brunei.

LiveWIRE Business Start-up Funding Scheme (BASfs) is given to the LiveWIRE Brunei Business Awards winners and participants from Business Plan Series and other applicable programmes of LiveWIRE (Darussalam Enterprise, 2023).

6.3 Infrastructure and related facilities

Darussalam Enterprise is the provider of industrial space and facilities for the manufacturing sector, as such it takes care of 25 industrial for MSMEs and FDIs in Brunei apart from providing suitable infrastructure for its customers. Also, there is Kontena Park which provides the suitable market environment for foodpreneurs to test and validate their products. Shared Kitchen provides micro (One to four employees) and small food-based businesses (five to nineteen employees) with cost effective facilities to enable them to increase their food productions whereas Youth Ground provides Ready Built Factories (RBF) at a cost-effective rate to ease youth entrepreneurs to start, run and grow their businesses with favourable terms and conditions. Energy Incubation Centre provides the following services (Darussalam Enterprise, 2023):

- (i) Training programmes for improving indigenous MSMEs capabilities for good performance.
- (ii) Co-working space and facilities at SPARK Centre for newly established indigenous MSMEs to commence work and networking.
- (iii) Panel of mentors for mentoring incubates.
- (iv) Information on forthcoming basic tenders in the energy sector for incubates to get involved.

Digital Technology Showcase & Digital Playroom of BIL, Brunei provides current digital technologies which are rapidly changing the manner people live, work, and play.

6.4 Market accessibility

Inbound Market Access enables Darussalam Enterprise (DARe) to organize business matching and networking meetings with international entourage on matters related to collaboration with indigenous companies in Brunei. Moreover, DARe urges businesses to attend its training sessions on market access with national and international facilitators. For exposure and promotion to the international market, the Outbound Market Access of DARe the enables indigenous companies in Brunei to take part in outside Brunei expositions, trade fairs, and workshops (Darussalam Enterprise, 2023). Also, they have the opportunity to attend business matching sessions. Additionally, DARe's Market Access Unit guides businesses on the export requirements of intended countries besides assisting to improve the commercial readiness of their products and services. MPRT provides Export Facilitation Services for agricultural businesses intending to export their products and services or intends to get access to new markets to be export-ready. LiveWIRE Brunei SME Promotion showcases different products, services, and innovative technologies for the global market from LiveWIRE's implementing partners and alumni of several organizations, Higher Institutions and startups (Darussalam Enterprise, 2023).

6.5 Other initiatives

LiveWIRE Hackathon brings the youth together as teams to spur their entrepreneurial prowess for coming out with suitable solutions related to the environment, agrotechnology, digitalisation, smart manufacturing, edutainment, and Entrepreneurship. LiveWIRE Brunei Business Awards recognises excellent young Bruneians entrepreneurs who are able to produce high quality business planning besides carrying out exceptional business operations. Shell Global Top Ten Innovators Award-LiveWIRE Brunei assists in growing businesses of entrepreneurs *via* cash prizes, mentoring, and promotion on Shell communication channels (Darussalam Enterprise, 2023).

7.0 BRUNEI'S FOOD SECURITY, SAFETY, AND NUTRITION

This section discusses the initiatives of which are being pursued to guarantee the sustainable food sovereignty of Brunei.

7.1 Food Security

Achieving Brunei's sustainable food security is a major priority of the country's government to wean Brunei from importing the bulk of its food needs. This might have partly called for incorporating the national food security policy in Brunei's development plans not only for achieving sustainable food sufficiency but to also diversify production and exports. The policy was formulated to: (i) increase the domestic production of rice, vegetables, poultry, livestock, and fish; (ii) develop the agri-food industry; (iii) produce high-value-added products using new agricultural and fishing methods and technologies; (iv) conserve and protect the country's biological diversity; and (v) attract foreign direct investment for the agricultural, fisheries, and food processing sectors. To achieve these goals, local farmers were provided with and are still being provided subsidized: (i) infrastructure facilities (Roads, irrigation, and electricity); (ii) seeds; (iii) liming materials and fertilizers; (iv) vaccines for the livestock; (v) farming equipment; and (vi) financial and technical assistance.

In relation to this, efforts are in place to ensure a stable food availability by practicing sustainable production agriculture which is associated with sufficient supply of safe and nutritious food. For equitable, sustainable, and resilient food systems, Brunei is committed boosting its food system by accelerating the growth of agriculture and fisheries industries, domestic and foreign direct investments, in addition to using state-of-the-art technologies to increase food production for the national and international markets. In spite of its sustainable food security challenges, Brunei is stimulating sustainable agriculture which translates into improved productivity of farming systems besides ensuring stable consumer food price index that decreases or minimizes food insecurity for the lower-income households in particular. To this end, the MPRT, Brunei has rolled out some initiatives for enhancing food supply and value chain models with the primary goal of achieving sustainable food SSL. The initiatives of the ministry are rendering food availability stable besides keeping undernourishment low. Initiatives such as provision of tax free on personal income and incentives on export and import of specified agricultural goods and services, smart agricultural parks, farm infrastructure, subsidies, extension services, affordable land rentals, government-private sector partnerships, among others are increasing food production in the crop, livestock including poultry, and fisheries sectors. Achieving rice security remains the priority of Brunei because although the national rice SSL remains low. The progress in the productivity of the crop, livestock (Including

poultry), and fisheries sectors is related the deployment of contemporary agricultural technologies to smartify the country's food production systems and opening of new industrial sites. High yielding hybrid rice varieties cultivation at a commercial scale, soil health rejuvenation using organic amendments/conditioners from agro-wastes, water, disease, and pest management practices are among the measures that have been put in place to significantly improve paddy yield in the country to achieve at least 20 percent SSL.

For irrigated paddy growing areas, water management is based on the SCADA (Supervisory Control and Data Acquisition) systems. This technology is used for collecting, processing, and displaying data from its sensors and control systems in water dams besides providing, real-time monitoring and control of dams' operation. For pests, diseases, and fertilizer management the drone technology use is gradually being embarrassed. As another way of increasing paddy grain yield and quality in addition to regulating rice prices nationally, the Buy-Back Paddy Scheme, Milling Service Fees, and distribution of high yielding hybrid rice variety seeds to paddy cultivators are in place in Brunei (Prime Minister's Office, 2023). The Smart Farm Testbed Project in Brunei is a pilot project whereby agricultural farms in the country's smart agricultural parks are provided with IoT Smart Devices and training for adoption in their farms. This pilot project was conceived for developing and promoting the adoption of the modern IoT Smart Devices in the agricultural sectors especially for farmers in the smart agricultural parks of the country. By so doing, the modernized farming systems will not only become productive and efficient but the approach also ensures sustainable resource optimization, increased net profit of farmers without compromising the quality of the environment. Moreover, Productivity and Efficiency Joint-Funding for Digital Adoption Scheme encourages MSMEs to incorporate digital solutions in their operation MSMEs on co-sharing cost basis.

The Department of Agriculture, Brunei makes available to deserving farmers or investors agricultural lands (Table 7.1) to farm as contract faming. The land allocation is a biannual contract for mini trial projects. Primary goal is to entice farmers and investors particularly the youth to engage in lucrative modern farming. Also, the scheme is also opened to farmers or investors interested in having contract farming with Bruneian farmers. This contract farming enables farmers and fisheries entrepreneurs to use high technology systems to produce premium farm produce which are sold to companies in the contract farming. Among the expectations from the pilot projects are that the farmers or investors involved are able to (Darussalam Enterprise, 2023):

- (i) Practice advanced agriculture.
- (ii) Using high yielding varieties (breeds).
- (iii) Producing high-value products.
- (iv) Export market.
- (v) Renew the two-year contract in addition to getting more land for farm expansion if a set target in terms of for example yield, net profit, good agricultural practices at met.

Table 7.1: Farming type and land size provided by the Department of Agriculture, Brunei for pilot projects.

| Number | Farming type | Land size (Hectares) |
|--------|--------------|----------------------|
|--------|--------------|----------------------|

| | | |
|---|---------------------|----|
| 1 | Floriculture | 2 |
| 2 | Vegetables | 4 |
| 3 | Integrated crops | 4 |
| 4 | Miscellaneous crops | 4 |
| 5 | Non-seasonal fruits | 4 |
| 6 | Poultry | 4 |
| 7 | Paddy | 5 |
| 8 | Ruminant | 5 |
| 9 | Seasonal fruits | 20 |

Source: Darussalam Enterprise (2023).

The ongoing agricultural youth exposure initiative of MPRT, Brunei through farm visits, youth entrepreneurs expose to farms where their advanced agricultural technologies are significantly improving for example, crop productivity and farmers' net income. Besides exposing the youth into modern agricultural technologies and newer methods of farming the ultimate goal of this initiative is attract more youth into rewarding (High farm output and net profit) via contract farming. In terms of infrastructure and basic facilities, the Department of Agriculture and Agrifood and Department of Fisheries, Brunei provide well prepared or designed agricultural land and aquaculture sites at suitable locations for youth entrepreneurs to practice the contract farming on for example, a 20 ha and a 70 ha for farming and aquaculture (Fish cage farming), respectively (Darussalam Enterprise, 2023). For the fisheries sector, among the other efforts in post productivity are hatching and breeding management projects for rostris blue shrimps; Recirculating Aquaculture System technology at breeding sites for fry (Fingerlings) and fish (sea juveniles) (Prime Minister's Office, 2023). Smart Aquafarm Pilot Projects in the forms of pilot projects which offer domestic solution developers the opportunity to develop, industry-test, and locally customized data analytic solutions for aquaculture sec in Brunei are ongoing. Showcasing how smart technologies are able to significantly improve yield quality, quantity, and net profit of farmers could enable rapid diffusion of these emerging technologies in aquacultural farming systems encouraging more operators to adopt these technologies.

7.2 Food Safety

Brunei has consistently demonstrated unwavering dedication to achieving sustainable food safety and quality. Attest to this is the establishment of Brunei Darussalam Food Authority (BDFA) in 2021 to ensure that imported food meets the country's food safety and quality requirements (Darussalam Enterprise, 2023). For example, this authority does not only conduct microbiological and chemical testing on imported meat for approval but it also mandated to confirm the safeness of inbound processed food into the country. Nationwide, BDFA facilitates the domestic food industry growth and development in terms assisting the domestic food industry to meeting the export market's requirements. An example is inspection of the domestic food processing premises and provision of required certifications listed as follows (Prime Minister's Office, 2023):

- (i) Export Health Certificate.
- (ii) Free Sales Certificate for processed foods.
- (iii) Declaration of Free from Animal Fat.

7.3 Food Nutrition

In terms of food nutrition, Brunei subscribes to the ‘Giving Every Child the Best Start in Life’ concept. This is consistent with the World Health Organisation (WHO)’s global targets for identifying “priority areas in maternal, infant, and young child nutrition”. To this end, the Ministry of Health (MOH), Brunei monitors the course for achieving maternal, infant, and young child nutrition outcomes listed as follows (Prime Minister’s Office, 2023):

- (i) Reducing stunting among children under-five.
- (ii) Childhood wasting.
- (iii) Controlling childhood obesity.
- (iv) Increasing the rate of exclusive breastfeeding in the first six months.

Unlike some of the Southeast Asian countries which are being challenged by overweightness, anaemia, or stunted growth, Bruneians are challenged by overweightness because it ranks the second highest in the region. For example, approximately 20 percent of the adolescents in Brunei are obese. A similar trend is surfacing in younger children. Since 2009, yearly one per cent increase in the prevalence of obesity has been observed. Among the initiatives of the health ministry of Brunei in redeeming the afore-stated plights are listed as follows (Prime Minister’s Office, 2023):

- (i) Maintaining nutrition in child care centres (National Nutrition and Physical Activity Guidelines for Child Care Centres).
- (ii) Healthier Choice Logo (Encouraging food industries, particularly food manufacturers and food suppliers, either international or national to reformulate and produce healthier choice products).
- (iii) Implementation of Food Programmes in schools by the Ministry of Education, Brunei (Feeding Scheme).
- (iv) Hope and Child Hope Programme targets the most disadvantaged children.

8.0 CURRENT BRUNEI FOOD SELF SUFFICIENCY LEVEL

Several government interventions have resulted in the strong growth of the poultry sector to the extent that Brunei is self-sufficient in eggs and broilers production and so will be for the day-old chicks and fertilized eggs production (Table 8.1) in the near future (Department of Agriculture and Agrifood, 2024). The poultry sector was enhanced to accelerate country’s small and medium-scale enterprises growth for a direct bearing on the processing and marketing centres, an example is the Mulaut Abattoir (Market outlets) for the poultry producers. This private-public partnership enables the private sector to play a key role in accelerating the poultry sector growth and development whereas Brunei government provides the basic infrastructure, amenities, and production-support services.

Table 8.1. Status of Brunei’s Food Self Sufficiency Level

| Food type | Self Sufficiency Level (Percent) |
|-----------|----------------------------------|
| Eggs | 103.10 |

| | |
|------------------------------------|--------|
| Broilers | 100.00 |
| Day old chicks | 94.60 |
| Fertilized eggs | 80.10 |
| Goat and sheep meat | 5.40 |
| Beef (Buffalo and cattle) | 3.00 |
| Tropical vegetables | 72.70 |
| Tropical fruits | 43.00 |
| Miscellaneous crops | 10.90 |
| Rice | 8.10 |
| *Fishery (Fishing and aquaculture) | 71.00 |

Source: Department of Agriculture and Agrifood (2024); *Ministry of Primary Resources and Tourism (2023)

The goat, sheep, buffalo, and cattle meat productions are low such that live cattle are imported from a cattle ranch in Australia own by Brunei government. Therefore, there is a need for significant enhancement in this livestock sector in terms of for example, animal husbandry including hardy breeds, disease, land, feed, and so on management. The livestock area and number entrepreneurs are decreasing because of consolidation and involvement of the large-scale private sector. Furthermore, the decrease is related to the significant decrease in the buffalo rearing. It is possible that the companies involved this sector are being efficient in space optimization or there is a shift in their interest in this sector. Unlike the poultry sector which is growing well, there is more room for improving the productivity of the crop and the fisheries sectors (Table 2). Among the important practices needed to be put into place to increase the SSL of the crop sector are soil, pests, diseases, seeds, water, and fertilizer management through for example, precision farming to ensure the cropping systems are site-specifically managed in terms of spatial and temporal variations. This is possible through leveraging the on-going Agriculture 5.0 methods and technologies without degrading the quality of the environment. Whilst the productivity in the fishing sector is on the increase, the converse is true for the aquaculture sector (Ministry of Primary Resources and Tourism (2023) hence, the current 71% SSL of the fisheries. Perhaps, the decline in the aquaculture productivity relates to diseases infestation in the shrimp production and also lack of quality shrimp fry, thus disease and quality fry management in the fisheries sector is essential. Besides providing infrastructure and amenities for the aquaculture sector, Brunei needs to forge joint ventures with external investors for financing and expertise.

9.0 IMPACTS OF THE HIGH-QUALITY OF LIFE INITIATIVES OF BRUNEI

This section discusses the direct and indirect effects of the Brunei's high-quality of life initiatives in the country.

9.1 Human Development Index (HDI)

The government's policy on human development has resulted in classing the country among the countries in the world with very high human development score (Human Development Index of 0.823; 0.814 for female Bruneians and 0.829 male Bruneians) in 2022. This ranks Brunei 55 out of the 193 countries in the world. In Asia, Brunei is ranked number 5 in the East Asia and Southeast Asia. This index indicates the level of nations' health, education, and standard of living (United Nations Development Programme, 2024). Additionally, the Gender Development Index (GDI) of is reported as 0.983. This index the uses same indicators of HDI

to measure gender inequality in achievements in three basic dimensions of human development such as health (Life expectancy of female and male at birth), education (Female and male expected years of schooling for children and female and male mean years of schooling for adults aged 25 and older.), and command over economic resources (Female and male estimated earned income). There has been a general improvement in the countries life expectancy which stands at 74.1 years and 78.2 year for male and female Bruneians, respectively (Association of Southeast Asian Nations, 2024), indicating that female Bruneians live approximately four years longer than male Bruneians.

9.2 Labour Force and Earnings

In terms of labour and its related matters, the unemployment rate for persons aged 18 years and beyond in 2023 was 5.1 percent, an increase from 5.0 per cent in 2022, resulting in the employment rates for 2022 and 2023 as 95.0 percent and 94.9 percent, respectively (Department of Statistics, 2024). However, the 2023 unemployed rate for the youth aged between 18 years to 24 years was 16.8 percent compared with 17.2 percent in 2022 (Department of Statistics, 2024). For the 2023 unemployed, 59.8 percent and 40.2 percent were males and females, respectively (Department of Statistics, 2024). Between 2022 to 2023, the labour force (18 years and beyond) of Brunei grew by 3 percent because the total number of the employed persons increased by 2.9 percent. Also, the labour force participation rate increased from 65.9 percent in 2022 to 67.2 percent in 2023 because of the increase in the number of employed in the public sector (Department of Statistics, 2024). Moreover, in 2023, the employment to population ratio increased from 62.6 percent in 2022 to 63.7 percent, suggesting a modest improvement of the capacity and effectiveness of the economy of Brunei in providing jobs. Out of the total number employed in 2023, 60 percent were males whereas 40 percent were females. Approximately 70.6 percent of the employed were Bruneians and the remaining 29.4 percent were foreign workers. Between 2022 and 2023, the employed Bruneians increased by 4 percent whereas the employed foreign workers increased by 3.4 percent. The public sector absorbed most of the increased number of the Bruneians employed but the opposite was true for foreign workers who got employed by the private sector mainly in the accommodation and food sectors. In 2023, the majority of the number of employed aged between 18 years and 59 years (Department of Statistics, 2024). The employment status in 2023 suggests that employees, own-account, employers, and contributing family workers constituted 92.5 percent, 4.0 percent, 2.8 percent, and 0.6 percent, respectively. The top three economic activities were public administration (20 percent), wholesale and retail trade (14.9 percent), and education (9.2 percent) whereas the top three professions were service and sale workers (21.7 percent), professionals (17.3 percent), and secondary (16.0 percent) (Department of Statistics, 2024).

In 2023, the average working hours on main job per week were 45.8 hours, compared with 46.2 hours per work in 2022. The average monthly income from all jobs (Main and secondary) in 2023 was BND1,758 per employed person compared with BND1,793 in 2022 but Bruneians earned a higher income of BND1,962. Generally, the average monthly income increased, particularly in the public sector, where Bruneians earned an average of BND2,048 compared with BND1,911 in 2022. The median income from employment increased to BND960 from BND900 in 2022. The labour underutilization rate was 14.9 percent, compared with 12.7 per cent in 2022. Labour Underutilization is either time-related underemployed who worked less

than 40 hours, or unemployed or in the potential labour force as available non jobseekers or unavailable jobseekers (Department of Statistics, 2024).

9.3 Employment by economic activity

This section presents the shares of employment in percentage by economic activities of Brunei based on agriculture, industry, and services as categorized by Association of Southeast Asian Nations (2024). The Association of Southeast Asian Nations (2024) defines agriculture as an aggregation of crops, animal production, forestry and fishing; industry as consisting of manufacturing, construction, mining and quarrying, electricity, gas and water supply; services as comprising market services and non-market services. The market services entail trade, transportation, accommodation and food, and business and administrative services whereas the non-market services include public administration, community, social, among others. In line with this classification, the contributions of agriculture, industry, and services were 1.3 percent, 20.5 percent, and 78.2 percent, respectively (Association of Southeast Asian Nations, 2024). This suggest that majority of Brunei's workforce is engaged by the service sector although recent growth of the manufacturing sector contributes significantly to the industry category. In 2020, 2021, and 2022, the manufacturing sector as an example, employed 9,100, 19,400, and 13,700 employees (ASEA Secretariat, 2023).

9.4 Economic growth and size

In terms of economic size and growth, Brunei's GDP per capita in 2023 was US\$33,508 and it was second to Singapore's GDP per capita of US\$84,714. Compared with the contraction of -1.6 percent in 2022, the country's economy modestly grew or improved by 1.4 percent (Association of Southeast Asian Nations, 2024). According to Association of Southeast Asian Nations (2024), although the real GDP of Brunei improved in 2023, the country's nominal GDP at current prices decreased from US\$17 billion in 2022 to US\$15 billion in 2023 because of lower prices for goods and services. This caused the overall decrease in production value in spite of the increased volume of goods and services.

9.5 Brunei's export orientation

The 2023 ASEAN merchandise trade share and growth rate indicates that Brunei's share and growth were 0.5 percent and -22.4 percent, respectively with exports and imports services of US\$ 0.3 billion and US\$ 1.6 billion, respectively (Association of Southeast Asian Nations, 2024). The trade deficit of US\$1.3 billion suggests how limited the trade services of the country is. Hence, the institution of Brunei's export orientation. Import substitution applies to food processing, fertilizers, machinery, and transport equipment. The Brunei Fertilizer Industry is the biggest fertilizer plant in Southeast Asia. With its high technology, produces approximately 1.4 million tonnes per year of high-quality granular urea for the domestic and the international markets. Large-scale manufacturing companies have emerged in the pharmaceutical, methanol, integrated petrochemical refineries, renewable energy, fisheries, poultry, animal feed, container shipping line, gas-based petrochemical (Methanol), carbon, steel pipe manufacturing, organic shrimp farming, microalgae cultivation and astaxanthin production, oil country tubular goods

(OCTG), multipurpose agriculture farming, refineries and aromatic cracker, molecular diagnostic laboratory, and protein manufacturing industries. These industries are largely export oriented, although some are also import-substituting. They which are located in the 26 industrial parks across Brunei for high value-added products.

9.6 Brunei's GDP based on its economic structure

Relating Brunei's GDP to the primary (Agriculture, mining, and quarrying), secondary (Manufacturing, electricity, gas and water supply, and construction), and tertiary (service industries) sectors is essential because it suggest Brunei's economic structure and the individual contributions of the sectors to the country's overall economy (Association of Southeast Asian Nations, 2024). Approximately 40.4 percent of the total GDP of Brunei comes from the primary sector followed by the secondary sector (21.5 percent), and the tertiary sector (38.1 percent) (Association of Southeast Asian Nations, 2024). The modest contribution/growth of the tertiary sector is consistent with the value placed on domestic trade, transportation and accommodation, finance, public administration, and professional services by the emphasis of Brunei's economic diversification drive on structural shift from resource-dependent ventures to more value-added activities Brunei economy modernises and reduces reliance on primary sector (Association of Southeast Asian Nations, 2024). As a beginner, the encouraging growth of the manufacturing industry (Figure 9.1) of Brunei in recent times could be intensified to push the tertiary sector further apart from providing more jobs by the manufacturing sector.

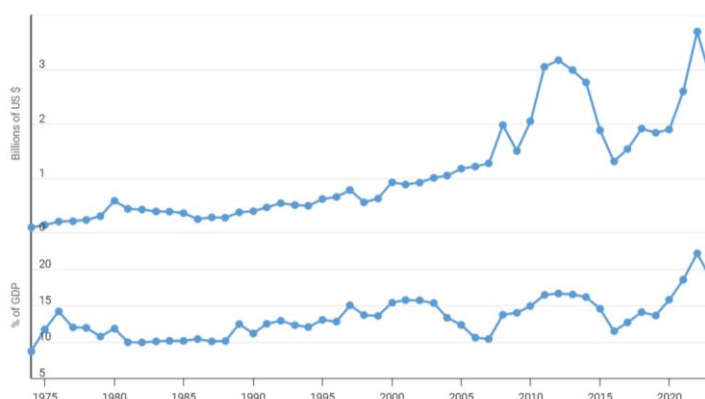


Figure 9.1. Growth and contribution of Brunei's manufacturing industry to the economy of the country (1974 to 2023).

9.7 Healthcare

In terms of health, Brunei continues to record low infant mortality rates. In 2018, infant mortality rate per 1,000 live births was 9.0 deaths and this has been decreasing. As of 2023, the infant mortality rate per 1,000 live births was 6.8 deaths (Association of Southeast Asian Nations, 2024). This achievement is also consistent with the high births (99.6 percent) attended by skilled health personnel in the country, suggesting well-developed healthcare systems with broad access to skilled professionals during childbirth (Association of Southeast Asian Nations, 2024). Density of the health workers in the country is also impressive because health workers (Availability, accessibility, skill quality, distribution, resources etc.) play significant role in

enhancing the healthcare ecosystem in addition to ensuring readily available health services cannot be overemphasized. To this end, Brunei whose population is less than half a million has 24 medical doctors, 65 nursing and midwifery personnels, 7 dentists, and 2 pharmacists per 10,000 population suggests a well-sized healthcare force (Association of Southeast Asian Nations, 2024).

9.8 School gender parity

Brunei appears to be committed to gender parity in schools as suggested by its Gender Parity Index (GPI) of 1.01. This score suggests male and female pupils have equal access to primary education but with a slight tilt favouring female pupils (Association of Southeast Asian Nations, 2024). Additionally, Brunei ensures low pupil-teacher ratio as suggested by the score of 10.0, indicating better teacher availability and smaller class size (Association of Southeast Asian Nations, 2024).

9.9 Connectivity

Under the auspices of Unified National Networks, Brunei building of the digital infrastructure in Brunei and by extension, the telecommunication and digitalization space has improved significantly. For example, the number of internet subscribers per 100 persons increased from 95 in 2019 to 99 in 2023. Approximately 99 per cent of Brunei's inhabitants has access to mobile cellular networks. This feat is notable because it is one of the important indicators for determining the extent of technology adoption and digitalisation. Another achievement is the smooth transition from 3G through 4G to the ongoing 5G and smart water and electricity meters. In 2023, the 4G network of Brunei was approximately 100 percent and the 5G network use nationwide was introduced in 2023. Approximately 5,900 km fibre network serving approximately 160,000 homes has been established and there are preparations for additional 350 km fibre network for 11,500 homes. In 2024, Brunei was ranked second among the Southeast Asian Countries for being a country with higher digital connectivity and accessibility (International Telecommunication Union, 2024). The Ministry of Health, Brunei has established a Digital Health Unit for formal digital health structure and strategy. An example being patients' medical history under the public healthcare Bru-HIMS which integrates patient data for achieving "One Patient One Record". Brunei's Ministry of Education Digital Transformation Plan which focuses on: (i) Enabling policies and infrastructure, (ii) Educational technology, and (iii) Educational management. These components are driven by the digital curriculum, digital assessment, upskilling of human resource, communication plan, converting and sharing data (Ministry of Education, 2022).

9.10 Energy

Brunei provides 100 percent access to electricity to its populace (Association of Southeast Asian Nations, 2024). This achievement is remarkable because access to electricity is a fundamental driver of economic empowerment, social well-being, and improved living standards. Furthermore, the extent to which a country's population enjoys electricity indicates

the nation's energy accessibility and progress towards achieving sustainable development. To this end, readily available electricity is a manifestation of how developed a nation is. The universal accessibility of energy is not limited to electricity but it also extends to clean fuels and technologies for essential household activities such as cooking, heating, and lighting (Association of Southeast Asian Nations, 2024). The fuels and technologies that are considered clean for cooking include electricity, natural gas, liquified petroleum gas, biogas, ethanol, and solar. From 2010 to date, Brunei has been providing its populace 100 percent universal access to clean fuels and technology for cooking (Association of Southeast Asian Nations, 2024). The renewable energy of Brunei is low because the renewable energy share in the total final energy consumption of the country increased little from 0 percent in 2016 to 0.2 per cent in 2023 (Association of Southeast Asian Nations, 2024). Nonetheless, by 2025, Brunei aims to have 200 MW of solar power. Tenaga Suria Brunei and BSP projects provide 1.2 MW and 3.3MW whereas the Sungai Akar project will provide 30 MW. Moreover, several sites have been earmarked for generating approximately 170 MW solar power by 2025.

9.11 Environment

Monitoring forests is important for ensuring both environmental sustainability and economic stability for communities. Brunei maintains 72.1 percent of its forest cover out of its total land since 2016 (Association of Southeast Asian Nations, 2024). Protecting these critical sites is essential to stopping biodiversity erosion and ensuring the sustainable, long-term use of natural resources across marine, terrestrial, and freshwater ecosystems. For the Key Biodiversity Areas, Brunei maintains 41.7 percent, 50 percent, and 5.4 percent terrestrial, freshwater, and marine ecosystems, respectively (Association of Southeast Asian Nations, 2024). Red List Index, serves as an indicator for measuring changes in the overall risk of extinction across various species groups. The index ranges from a value of 1, indicating that all species are categorized as 'Least Concern' (not at risk of extinction), to 0, representing a situation where all species are classified as 'Extinct.' Brunei has high RLI score of 0.85, lower overall risk of species extinction (Association of Southeast Asian Nations, 2024).

10.0 CONCLUSION

Brunei has comprehensive approach of improving the quality of lives of its populace because of collaborations and cooperations among relevant government agencies and the private sector. With this broad-based approach, carefully designed initiatives which positively impact the well-being of the population and economy of Brunei have been rolled out and they are yielding some desired results. An example being the well-established national welfare system whose effectiveness has rendered Brunei as a country with not absolute poverty. The welfare system in conjunction with the Brunei's whole-of-nation approach, the economy is being stimulated for continued improvement in the well-being of the populace. For this to be achieved sustainably, Brunei needs intensify its economic diversification drive particularly for the agricultural and manufacturing sectors as although these sectors could serve as important engines of the country's economic growth, their full potentials are yet to be realized. Thus, expanding the ongoing high value-added downstream activities to increase the existing small domestic market could boost the adoption of the digitalization and climate-resilient agenda in a sustainable manner. Furthermore, rapid digital literacy, retooling, skill alignment, re-skilling,

upskilling, and diffusing the ongoing digitalization and climate resilience activities into the traditional sectors, small businesses, and the labour market of Brunei are essential. With this approach, more of the dependants on the national welfare system and other interventions could be weaned or emancipated to become self-reliant to enable them to give back to the society.

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