Edelweiss Applied Science and Technology

ISSN: 2576-8484 Vol. 9, No. 1, 10-40 2025 Publisher: Learning Gate DOI: 10.55214/25768484.v9i1.2241 © 2025 by the authors; licensee Learning Gate

Digital competency among the aged entrepreneurs under the silver economy with soft power in Thailand

Kamolrat Intraratat¹*, Piyachat Lomchavakarn², Ratanasuda Punnahitanond³, Panicha Boonsawad⁴, Duangkamol Intaratat⁵

- 1,2,5School of Communication Arts, CCDKM, STOU, Thailand; kamolratchim@gmail.com (K.I.).
- ³School of Communication Arts, Bangkok University, Thailand.
- ⁴Srisavarindhira Thai Red Cross Institute of Nursing, Thailand.

Abstract: The rise of the elderly in Thailand experiencing a significant demographic transformation resulted in a growing senior population to become a super-aged society by 2030. This affacted the demand for "silver economy in Thailand. The objectives are to study (1) the overview of digital competency among the aged entrepreneurs under the silver economy with soft power; and (2) the mechanism for digital competency empowerment among the aged entrepreneurs under the silver economy with soft power in Thailand. Mixed-research method was employed by quantitative (survey questionnaire) and qualitative (Focus group discussion and interview) with a total of 100 samples and 15 key informants involved: the government workers, the aged entrepreneurs, the private & industrial workers, the digital competency expertise, the elderly expertise, and the community leaders. Two main results reflected the objectives accordingly: 1) the overview of digital competency summarized from survey questionnaire found most of the positive factors as follow; 1.1) positive attitude toward digital competency even of their quite low educational background; 1.2) their positive practical existing skilled in digital competency: digital communication, digital media production, privacy, security, analytic thinking skills that can be well applied with their silver economy's activities. 2) the mechanism for digital competency empowerment among the aged entrepreneurs found most urgent needs in more closed collaboration among all relevant sectors, starting from the lead government sector, private sector, and the local sectors to help expanding all kinds of empowerment activities. Deepen links by driving more inter-sectoral mechanism, resources sharing, regular consultation for internship, apprenticeship, on-site training, employment, market outlet and other schemes with equity, quality and sustainable practices.

Keywords: Aged entrepreneurs, Digital competency, Silver economy, Soft power in Thailand.

1. Introduction

1.1. Overview of the Silver Economy with Soft Power Contexts in Thailand 1.1.1. Thailand 4.0

Is an economic model that is based on innovation, creativity, high-quality services, and new technology, employed for boosting the quality of life. This initiative is, however, a steppingstone in the advancement of the country's development. Thailand 4.0 would focus on rotating the country's labor force into knowledge workers across key economic segments as to align with the 20-year National Digital Economy Masterplan. Since 2022, 61% of Thailand's GDP is predicted to be digitalized, due to growth in every industry driven by digital enhancement.

Thailand 4.0 focuses on a "value-based economy," as the country needs to deal effectively with disparities and the imbalance between the environment and society with its three elements, which mark

^{© 2024} by the authors; licensee Learning Gate

^{*} Correspondence: kamolratchim@gmail.com

a significant change in the country's economy and production: 1) Become a high-income nation by enhancing the country's standing to become a high-income nation through developing it as a knowledge-based economy. With an emphasis on research and development, science and technology, creative thinking, and innovation; 2) Move toward an inclusive society with equitable access to the fruits of prosperity and development; and 3) Focus on a sustainable growth and development in order to achieve economic growth and sustainable development without destroying the environment. So, new economy model "less for more" vs "more for less" and strategies has been implementing by changing the country's traditional farming to smart farming. Traditional SMEs to smart enterprises, and traditional services to high-value services, under the concept of "less for more" rather than "more for less" driven with six key strategies are: (1) national security; (2) national competitiveness enhancement; (3) human capital development and strengthening; (4) social cohesion and just society; (5) eco-friendly development and growth; and (6) public sector rebalancing and development.

1.1.2. Silver Economy

The rise of the elderly or the aged in Thailand has created a significant opportunity for investment in multiple business sectors. Like much of Asia, Thailand is experiencing a significant demographic transformation. The age of the population is shifting upwards due to urbanization and developments in technology and health services. Shrinking family sizes, coupled with longer life expectancies, have resulted in a growing senior population. As a result of these factors, Thailand will become a superaged society by 2030, meaning that 30 percent of the population will be 60 years or older. This growing population of seniors is living longer and consuming more, creating myriad business opportunities not only in the healthcare sector, but also in the technology, mobility, entertainment and tourism, and real estate and housing sectors. The demand for products and services in the "silver economy" market is booming in Thailand and other ASEAN countries. In recent years, ASEAN has witnessed a significant increase in health expenditures. For instance, healthcare expenditures in Thailand accounted for 3.71 percent of GDP in 20161 and that percentage is expected to increase in the coming years. The amount of money spent by, and on, aging Thais is predicted to increase at an even faster rate than the population ages because of new technologies, the costs of treating chronic illnesses and conditions, and the Universal Health Coverage scheme.

These silver economy businesses not only serve Thai seniors, but also the foreign seniors immigrating to Thailand at increasing rates, often 1 World Health Organization. (2019). Global Health Expenditure Database. Retrieved from http://apps.who.int/nha/database settling in resort cities. This trend is not unique to Thailand, which makes future investments in the Thai aging economy even more lucrative. Thailand has both a growing domestic demand for aging services and, due to its seamless connection to other ASEAN markets, serves as an ideal gateway to larger demand in the ASEAN region. These factors position investors in Thailand to profit from market shifts related to aging populations.

The Thailand Board of Investment (BOI) offers a number of tax incentives and non-tax incentives to support elderly-related products and services. The following activities are eligible for three to eight year corporate income Along with these supportive tax incentives, the BOI also offers nontax incentives such as permission to own land, 100 percent foreign-owned companies, visas, work permits and more – efficient services facilitated by the BOI's One-Stop Service Center. The combination of the Thai government's policies, investment promotion incentives, efficient tax (CIT) exemption: manufacturing businesses, including medical devices or parts, parts for electronic control and measurement instruments for medical/scientific devices, food and drugs, including medical food, food supplements, active pharmaceutical ingredients, targeted medicines as well as conventional and traditional medicines. In addition, manufacture of embedded software, high value added software and digital services such as medical technology also enjoy the same level of incentive. In the service industry, investors of hospitals, specialty medical centers, transportation services for patients, doctors or medical equipment can receive three to five years of CIT exemption privilege. However, health rehabilitation centers can qualify for

non-tax incentives, but they do not receive CIT exemption. connectivity, and the rapidly growing demand of aging populations in Thailand and Asia has set the foundation for businesses looking to profit from strong growth in the silver economy (Thailand Investment Review, 2019).

1.1.3. Soft Power

The power of creativity to build the Thai economy is one among the current flagship policy of Thailand. The government promotes creative economy blended with Soft Power developed from intangible heritage, knowledge, intellectual property, expertise, and creativity; linked to culture and society, and technology and innovation for the further development of the production of goods and services. National pilot of Five Thai Soft Power since 2022 are 5 Fs: Food, Festival, Fashion, Fighting, and Film. Currently, Soft power has become an important tool in supporting all kinds of Creative Economy of Thailand including the Silver Economy under Thai Ageing society now.

2. Overview Policy in Digital Competency and Aged Entrepreneurs in Thailand

Digital literacy and competency among the increasing aged group found only 63.10% while there is an increasing realization that digital connectivity can help reduce social isolation among aged people, facilitate their access to online public services, and enhance their productivity in any Silver economy activity under the current flagship policy "Silver Economy". Because, according to the United Nations (2021), approximately 34% of the aged people live in poverty, many of them live under the poverty line with less than 5-6 US\$ a day even of their monthly support by the government around 20 US\$ per person while under the high cost of living and inflation. Anyhow, the statistics from the Office of the National Digital Economy and Society Commission (2022), in Thailand there are 86.90% men and 85.90% women Internet users, with a gap of only 1%.

The government has been anticipating this shift since the late 1980s and has been addressing the changes through comprehensive plans and strategies. The main strategy is the drive of "the 2nd National Aging Plan on the Elderly (2002-2021)" with several policies and programs for seniors that support wellness, financial security, and active involvement in society and the economy. Numerous supporting measures have been enacted, such as the promotion of employment and income for the elderly through tax incentives for hiring older workers. Extension of the retirement age for civil servants is being considered as well. In addition, the government is also focusing on innovation and digital technology for healthcare, including medical services, long-term care, and all kinds of economic dimension under the Creative & Silver economy with Soft Power. Some of the key agencies are;

Ministry of Digital Economy and Society with a budget of more than 1.99 billion baht to train new graduates who may not have basic digital skills or do not meet the market needs (approximately 50,000 people for 3 months). The project will provide 10,000 Baht per month for project participants. Participants can choose at least 2 of the 4 training courses: 1) Online Content Creation, 2) Big Data Management, 3) Online Marketing, and 4)Online Commerce. After the training, job matching is done so that entrepreneurs can find people with skills that match their needs. It is expected that this job matching will be done under the platform "Thais have jobs". Success indicators of the project include 5,000 graduates who were able to progress into becoming digital entrepreneurs, and another 15,000 who were employed in digital business groups of workers replaced by technology or in excess capacity.

DEPA Digital Manpower Fund to support the digital skill development, both upskilling and reskilling, through "DEPA Digital Manpower fund." It is granted to individuals, youths, students, unemployed, government officials, government agencies, public and private institutes. The measure focuses on improving people's digital skills in high demand such as cybersecurity, programming, data analytics, coding, and cloud computing, etc. through both offline and online learning scheme.

Office of the National Digital Economy and Society Commission support the Digital Economy and Society Development Funds to finance digital development including the implementations and projects related to digital technology education for youth, the elderly and the workforce. 2.4 CCDKM (The

Research Center of Communication and Development Knowledge Management) under the umbrella of Sukhothai Thammathirat Open University (STOU), has been committed to increasing the social and economic impact by ICT (information and communication technologies) or digital tooling since 2006 till currently targets at all the grassroots and all the marginalized communities in Thailand and the ASEAN region. One among the popular empowering activities are for among the groups of SME, the MSME (Micro SME), the Start Ups, and others. Women entrepreneurs are one among the top beneficial groups.

3. Overview of Digital Competency of Thai People

Digital competency is a combination of knowledge, skills and attitudes with regards to the use of digital devices, digital technology in their daily life and earn a living to perform tasks, solve problems, communicate, manage information, collaborate, as well as to create and share content effectively, appropriately, securely, critically, creatively, independently and ethically (Kamolrat applied from Anders Skov, 2016)

Digital competency is all the essential skills and knowledge that professionals have to effectively use Information and Communication Technologies (ICT) in their work environment. Examples include IT literacy, digital literacy, media literacy, information literacy, internet literacy, etc. The ICT and its relevant services sector has the most demand for Thailand's emerging jobs. The Emerging Jobs analysis from both Linkedin 2020 Emerging Jobs Report Thailand and The Future of Jobs Report 2020 state the alignment of top emerging role in Data Analysts, Data Scientists, Digital Marketing Specialist, Software and application developer are top emerging jobs across industries in Thailand

To support digital competency development among all Thai people, the government set up the "Strategic 20-Year National Digital Economy Masterplan" as well as all relevant massive policies including the "Digital Economy and Society Development Plan (2017 - 2036)", a strategy dedicating to develop human capital towards the digital age by equipping all Thai people especially all groups of workers including the aged entrepreneurs with appropriate digital competency both of knowledge and skills in preparation for a life and career in the digital age and meet all the market demand under the digital era and the 4th Industry Revolution (Kamolrat Intaratat, 2020).

4. Research Methodology

Mixed-research Method using quantitative and qualitative techniques has been used to collect data from 100 aged entrepreneurs together with focus group discussion among 15 key informants from all relevant stakeholders: the government workers, the aged entrepreneurs, the private & industrial workers, the digital competency expertise, the elderly expertise, and the community leaders.

5. Findings

Two main results reflected the objectives of the study accordingly: (1) the overview of digital competency include eight main factors; and (2) the mechanism for digital competency empowerment among the aged entrepreneurs as follow;

5.1. Demography

Of the 100 aged entrepreneurs who run their silver economy activities. Majority of them are mid 50s to 70s years old. Bangkok and the outskirt of Bangkok are the top number of respondents. Majority of them gain upper and lower secondary school. Most of them reported as being the informal workers. Their most monthly income is 10,000 Thai Baht (below the minimum wage) follow by within the 10,000 to 20,000 Baht range.

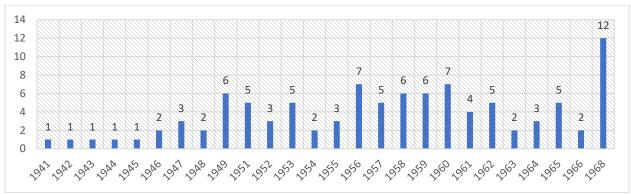


Figure 1.
The aged entrepreneurs.

The majority of the aged entrepreneurs comprises women, who constitute a significant portion of the participants.

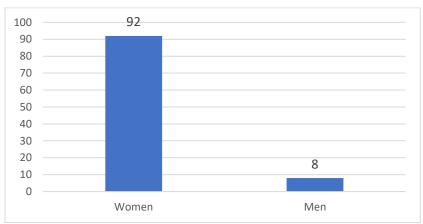


Figure 2.
Gender of the aged entrepreneurs.

The data indicates that a predominant number of the aged entrepreneurs are married. This is followed by a significant portion who are widowed, and a smaller group who are single.

DOI: 10.55214/25768484.v9i1.2241 © 2025 by the authors; licensee Learning Gate

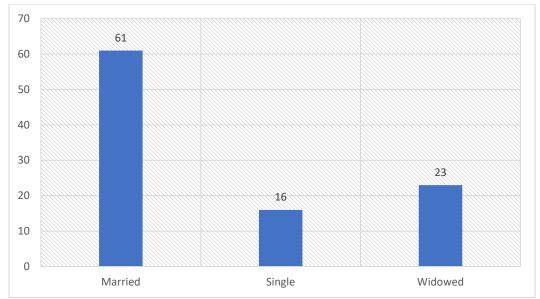


Figure 3. Marital status of the aged entrepreneurs.

The majority of the aged entrepreneurs have children, with a large number of them living with their children in their household.

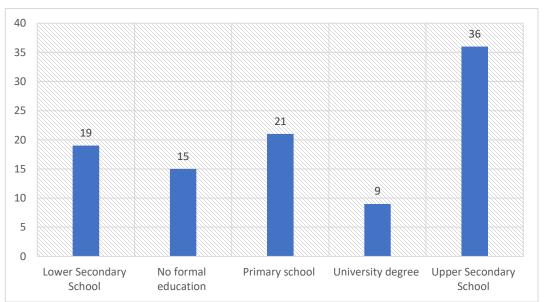


Figure 4. Educational background of the aged entrepreneurs.

The majority of the aged entrepreneurs are currently employed, primarily engaged in part-time informal work.

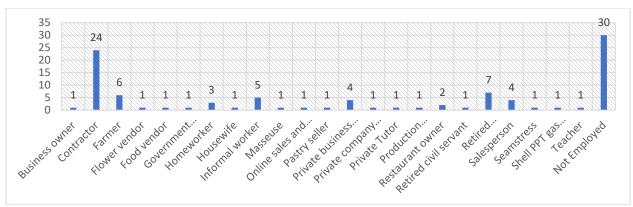


Figure 5. Silver economy activities of the aged entrepreneurs.

A significant number of the aged entrepreneurs reported earning within the 10,000-20,000 Thai Baht range, as well as in the 20,000-30,000 Thai Baht bracket, both of which are above the minimum wage. However, a substantial portion also reported earning less than 10,000 Thai Baht per month, which falls below the minimum wage.

5.2. Digital Competency of the Aged Entrepreneurs

The aged entrepreneurs provided insights on their use of digital devices for accessing the Internet, e-services, their preferred communication channels, platforms, and information sources.

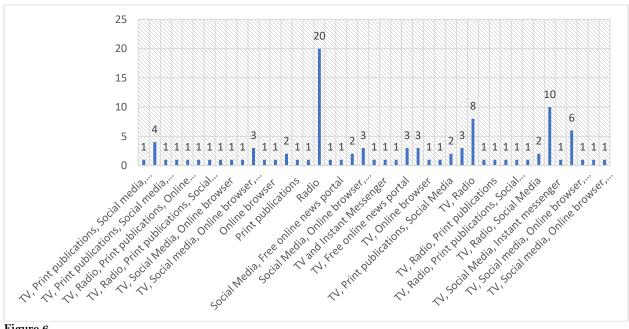


Figure 6.
News platforms used by the aged entrepreneurs.

DOI: 10.55214/25768484.v9i1.2241 © 2025 by the authors; licensee Learning Gate

The majority of the aged entrepreneurs primarily use mobile phones as their main communication devices, including for online access. Popular applications among these youths include Line, Facebook, and Instagram, with Twitter and WeChat also used by a notable portion.

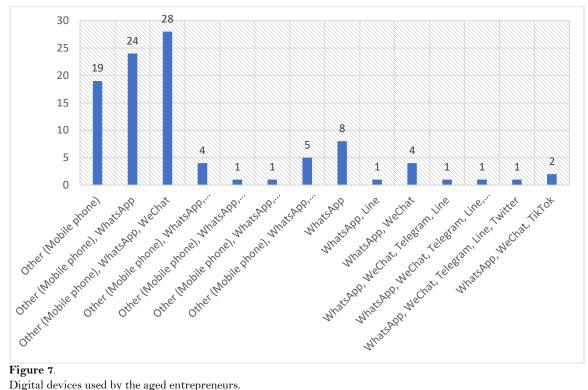


Figure 7. Digital devices used by the aged entrepreneurs.

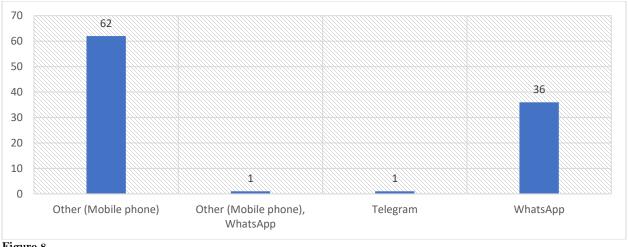


Figure 8. Digital devices used for online access relevant their silver economy's activities among the aged entrepreneurs.

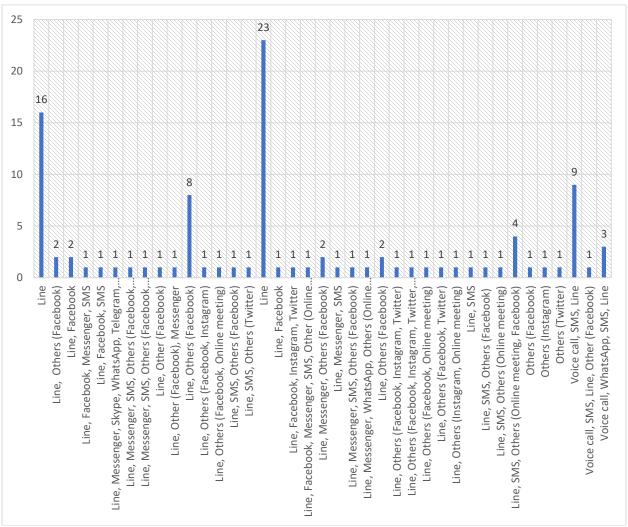


Figure 9.

Digital convergent devices uses by the aged entrepreneurs relevant to their silver economy's activities.

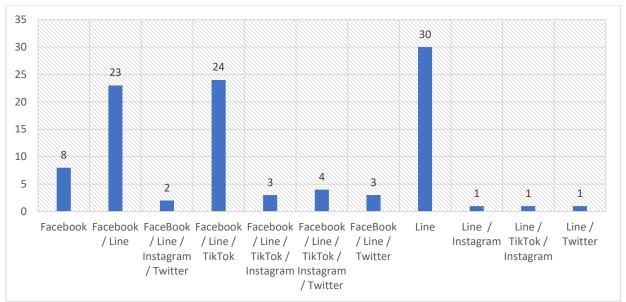


Figure 10.

Most popular social media platforms used by the aged entrepreneurs relevant to their silver economy's activities

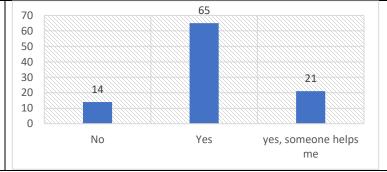
5.3. Digital Competency: Digital Communication of the Aged Entrepreneurs relevant to Their Silver Economy's Activities

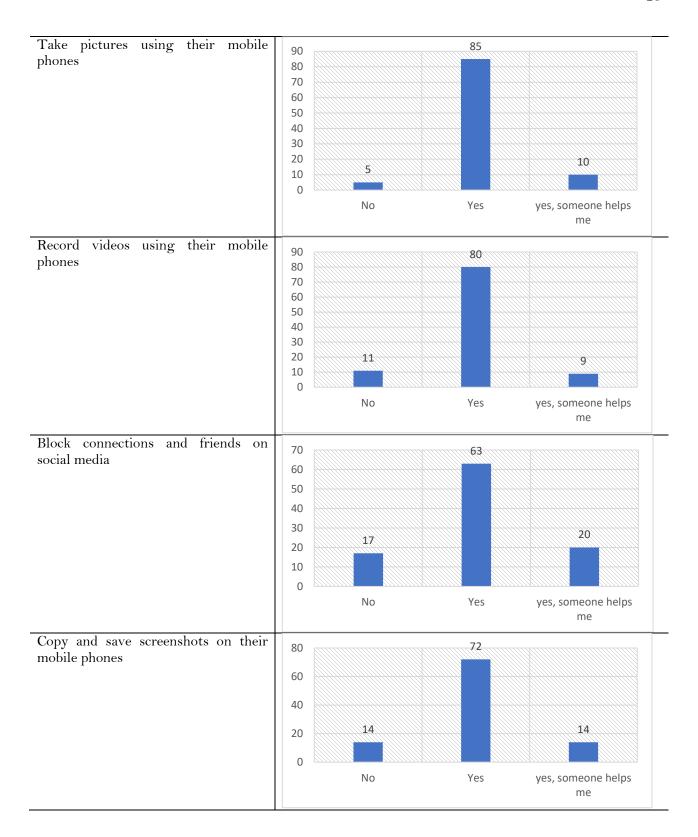
The graphs in the Table 1 show digital communication competency skills of the aged entrepreneurs relevant to their silver economy's activities.

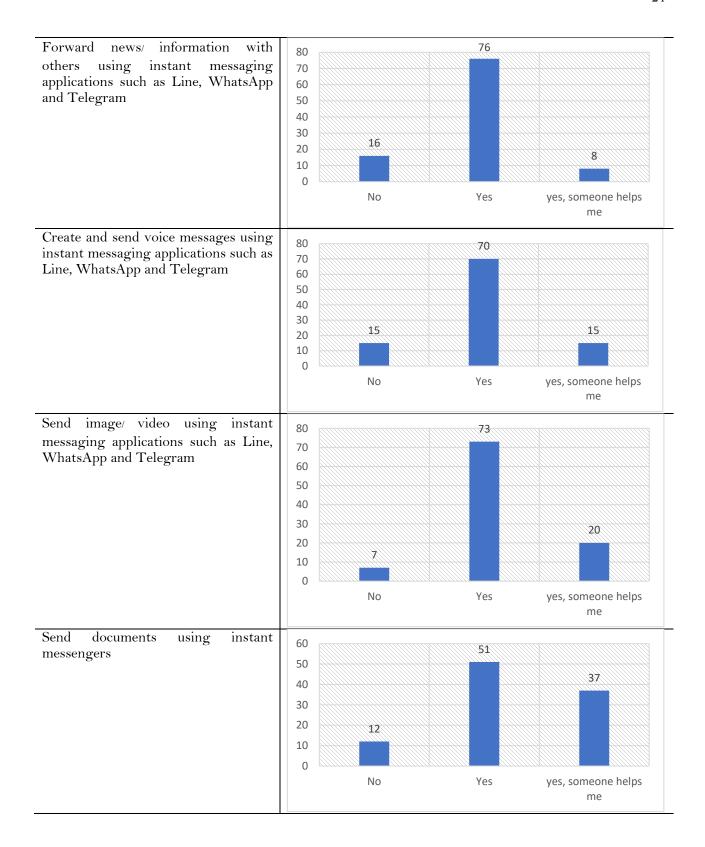
 Table 1.

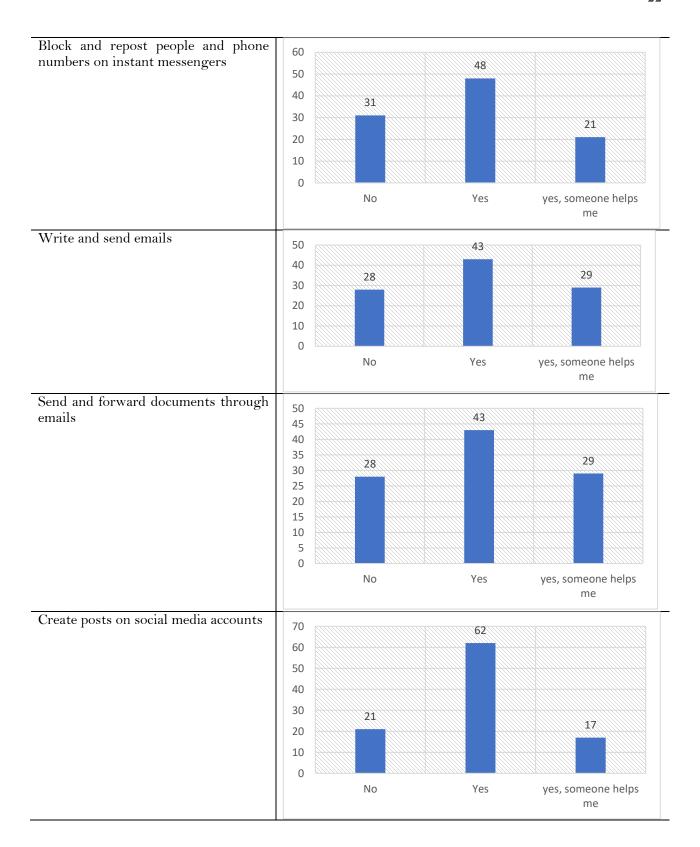
 Digital communication competency of the aged entrepreneurs relevant to their silver economy's activities.

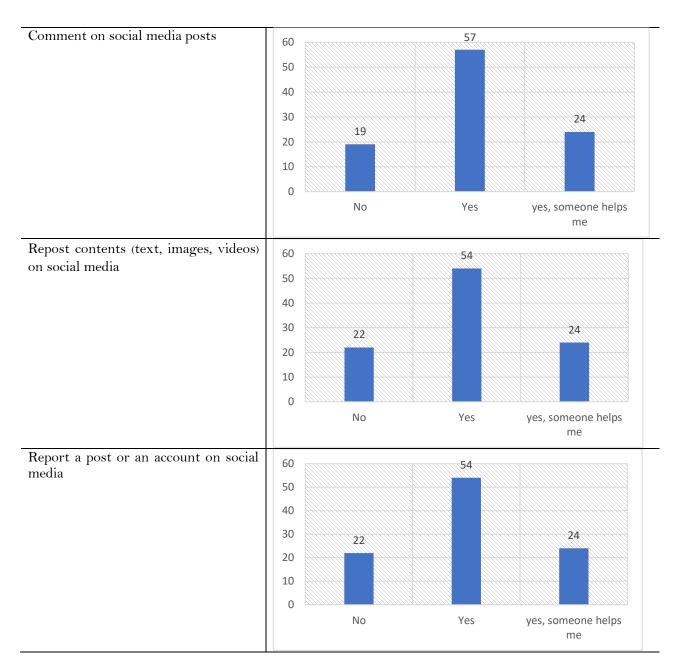
Reply to chats in the messenger platform and other instant messaging apps











5.4. Digital Competency: Digital Media Production Skills among the Aged Entrepreneurs relevant to Their Silver Economy's Activities

© 2025 by the authors; licensee Learning Gate

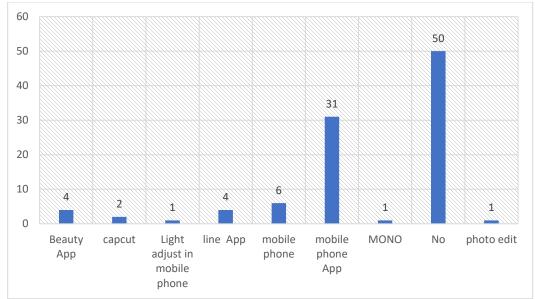


Figure 11.
Photo editing tools used in silver economy among the aged entrepreneurs.

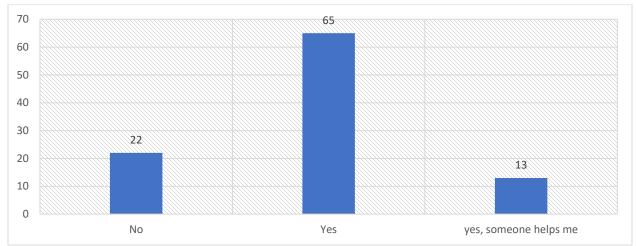


Figure 12.

Recording videos and posting on social media used in silver economy among the aged entrepreneurs.

5.5. Privacy and Security Skills among the Aged Entrepreneurs Group relevant to their Silver Economy's Activities

Majority of the aged entrepreneurs require assistance to understand and set their privacy and security settings.

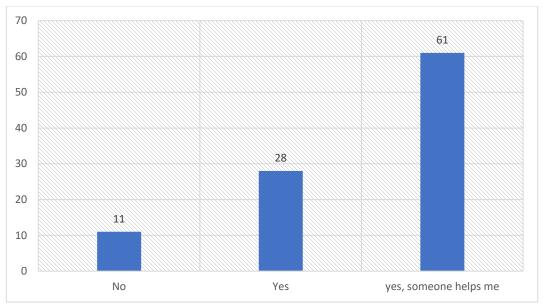
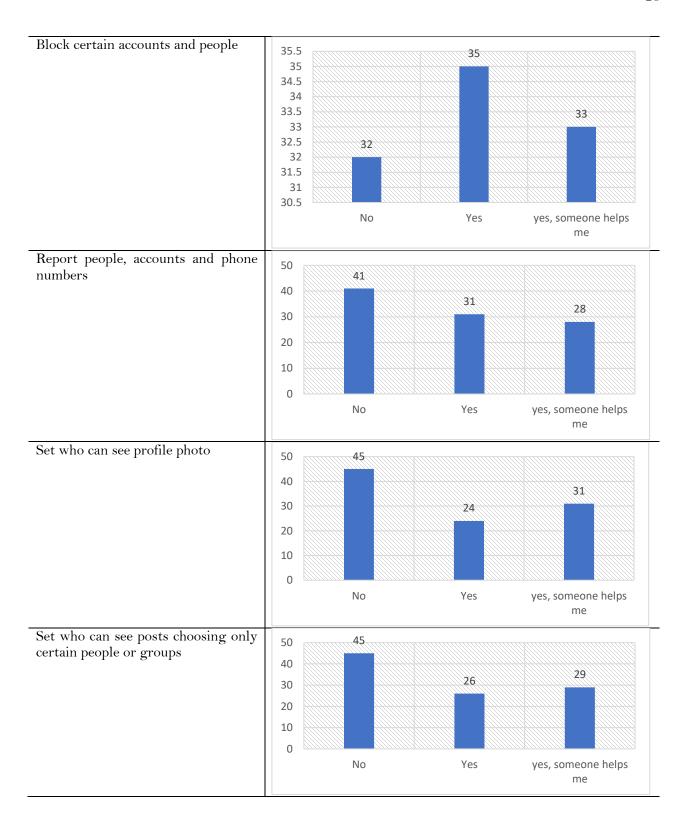


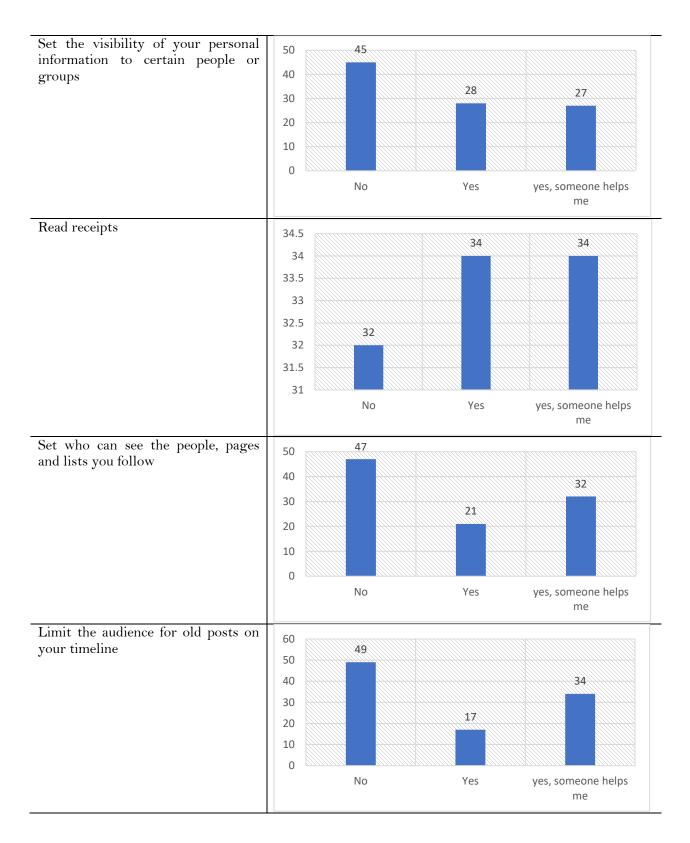
Figure 13.

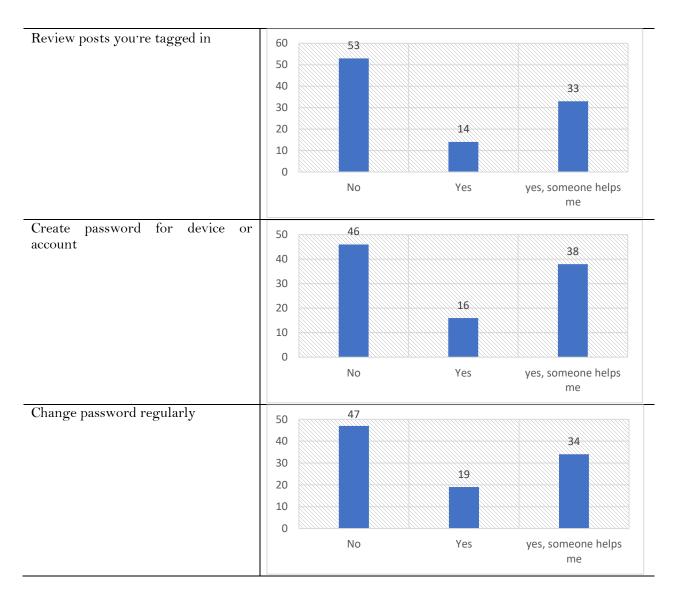
Skills of the aged entrepreneurs about privacy &security settings on their devices or digital platforms relevant to their silver economy's activities.

Table 2. Skills of aged entrepreneurs in privacy &security settings on their devices or digital platforms relevant to their silver economy's activities.

Skills	of	Aged	Entrepreneurs	in	Privacy	&Security	Settings
on their	Devices o	or Digital Pl	atforms relevant to th	eir Silve	r Economy's A	ctivities	
Set to last seen online		60 50 40 30 20 10	51	24		25	
			0	No	Yes		eone helps ne







5.6. Creative & Critical Thinking Skills in Silver Economy among the Aged Entrepreneurs

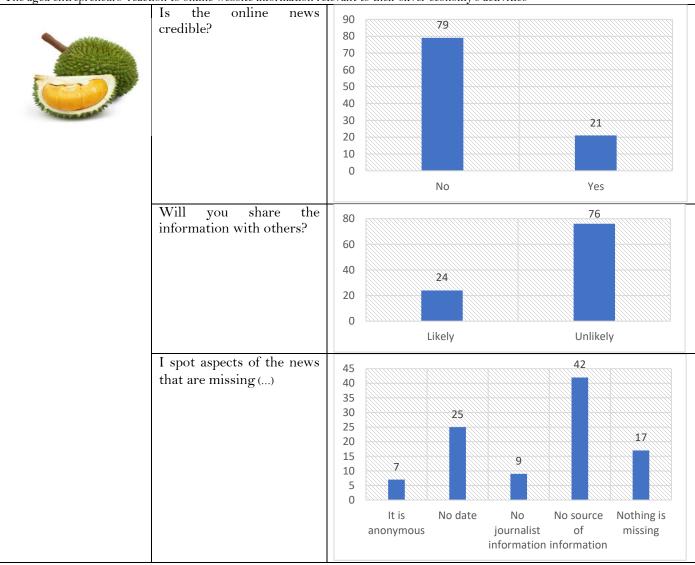
The aged entrepreneurs were interviewed a series of questions relevant to critical thinking skills in their silver economy activities and daily life.

DOI: 10.55214/25768484.v9i1.2241

 $\hbox{@ 2025}$ by the authors; licensee Learning Gate

 Table 3.

 The aged entrepreneurs' reaction to online website information relevant to their silver economy's activities



Majority of the aged entrepreneurs had critical thinking skill to analyze digital media and information from online sources and were unlikely to share it with others. The majority cited the absence of a source of information and a publication date as reasons for their skepticism.

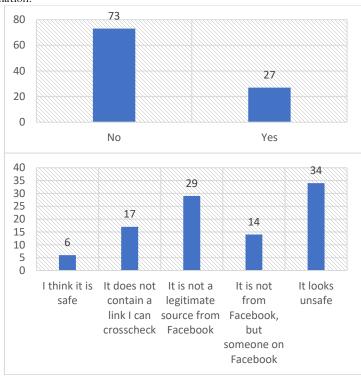
 Table 4.

 The aged entrepreneurs's reaction to Facebook information.



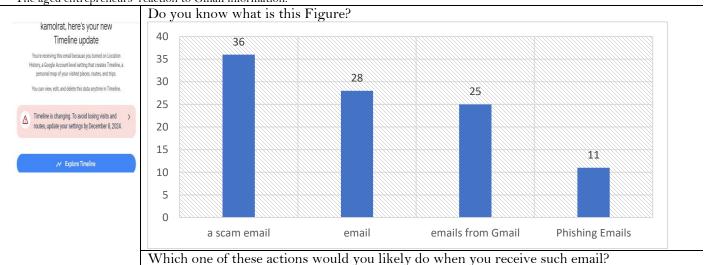
Is this post credible?

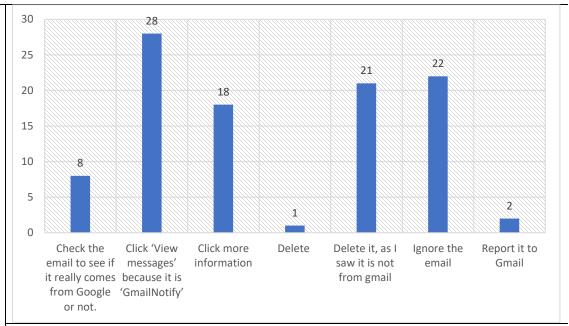
I spot aspects of possible disinformation (...)



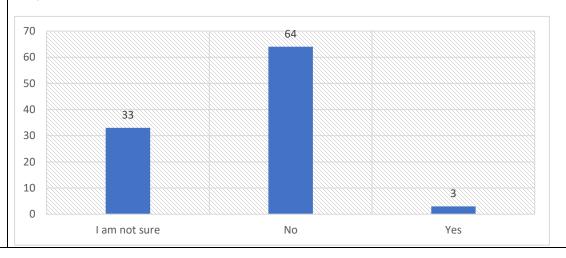
Upon encountering the Facebook information, the majority of the aged entrepreneurs also reported that it appeared not credible and seemed unsafe. They showed awareness that the facebook information did not come from a reliable source.

Table 5. The aged entrepreneurs' reaction to Gmail information.





Do you know how to report such email to Gmail?



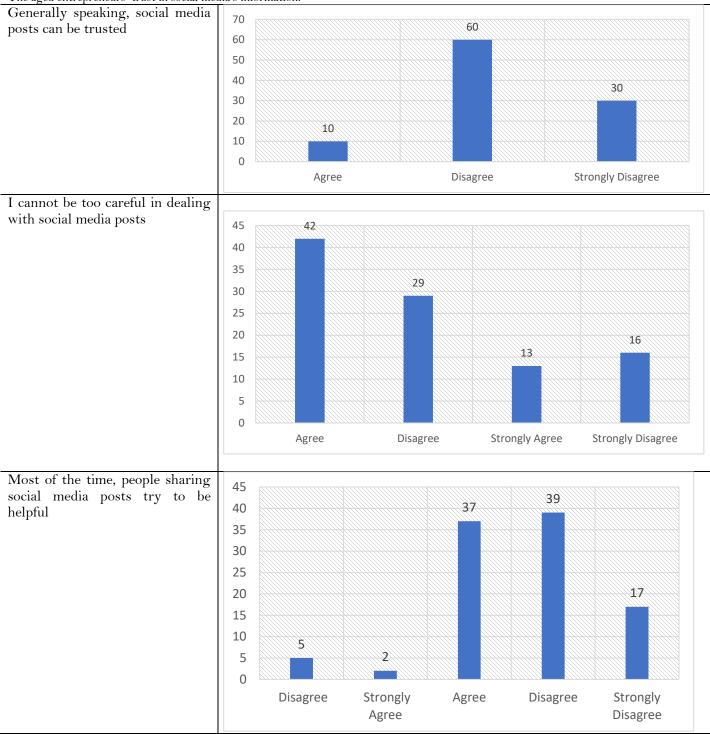
Majority of the aged entrepreneurs identified the figure as a scam email, while others simply recognized it as an email. A smaller number specifically noted that it is an email from Gmail. Many indicated they would click to view the message because it originates from Gmail Notifier, whereas others expressed a preference to either ignore or delete the email.

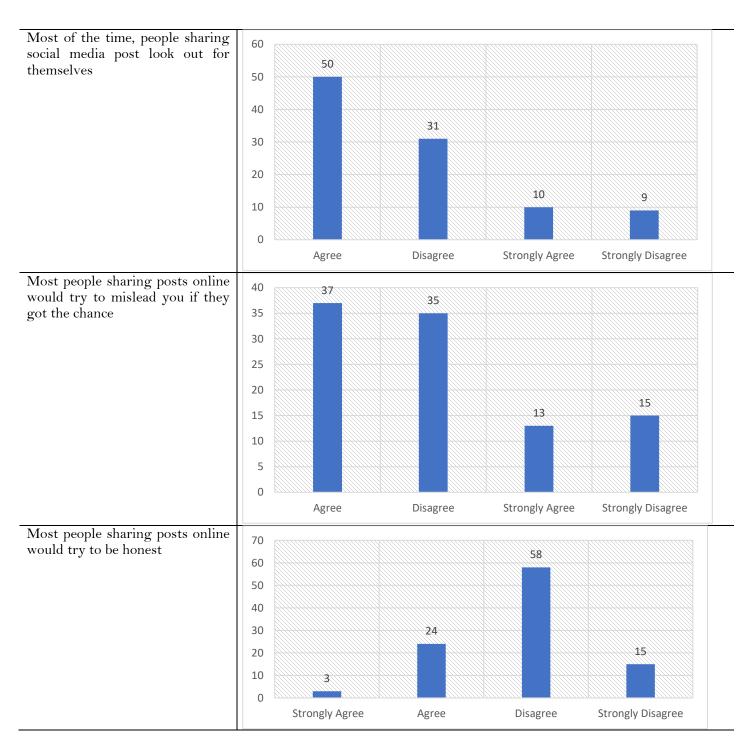
5.7. Trust in Social Media of the Aged Entrepreneurs

In evaluating trust in sharing information on social media, the findings indicate that the aged entrepreneurs gained more critical and analytical skills regarding the trustworthiness of social media posts.

 Table 6.

 The aged entrepreneurs' trust in social media's information.

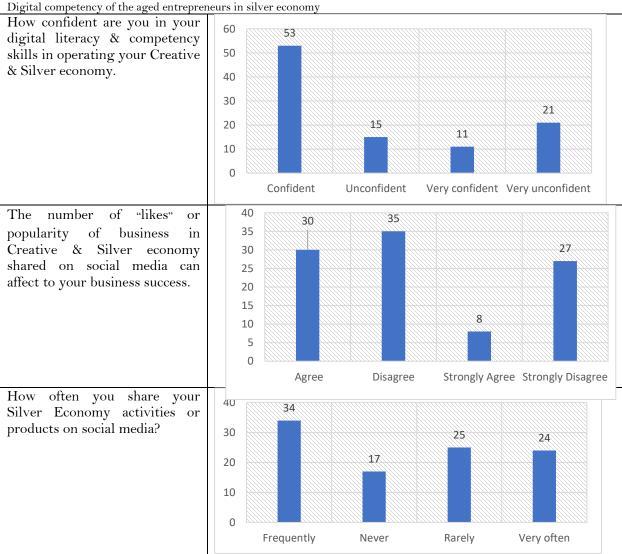




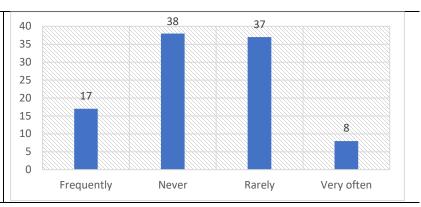
A significant majority of the aged entrepreneurs disagree with the notion that social media posts can be trusted. These respondents concur that one must exercise caution when engaging with such posts. The aged entrepreneurs exhibit a much greater level of skepticism regarding the helpfulness of social media posts. A majority of them affirmed that most people sharing posts online would likely try to mislead them if given the opportunity.

- 5.8. Digital Competency: Confidence & Analytic Thinking Skills of The Aged Entrepreneurs in Silver Economy. The results found quite positive among the aged entrepreneurs as showed in Table 7-8.
- 5.8.1. Digital Competency: Confidence & Analytic thinking Skills of the Aged Entrepreneurs in Silver Economy

Table 7.



Have you ever got trained about ICT or Digital skills direct for your Creative & Silver economy?

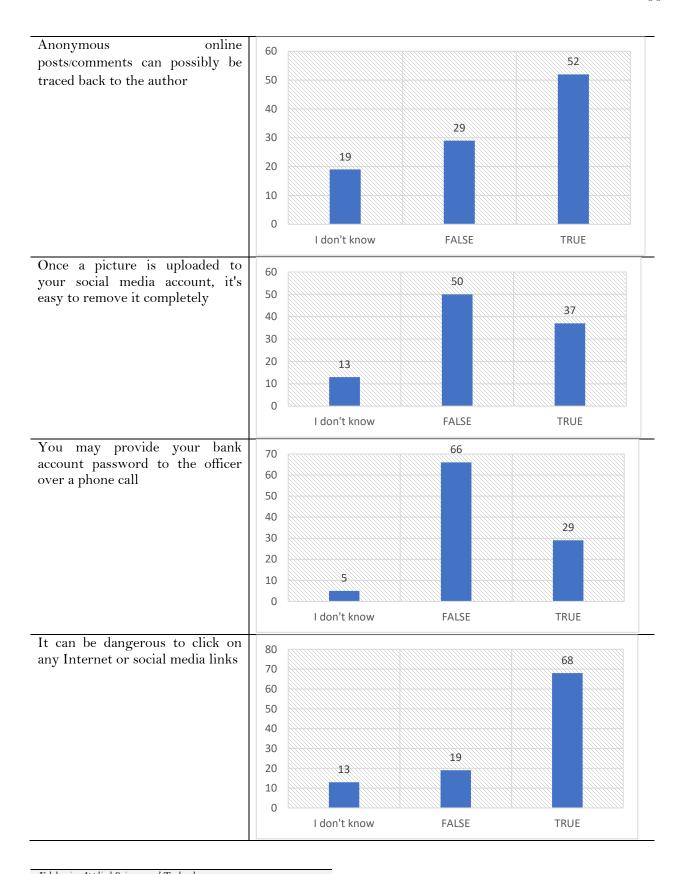


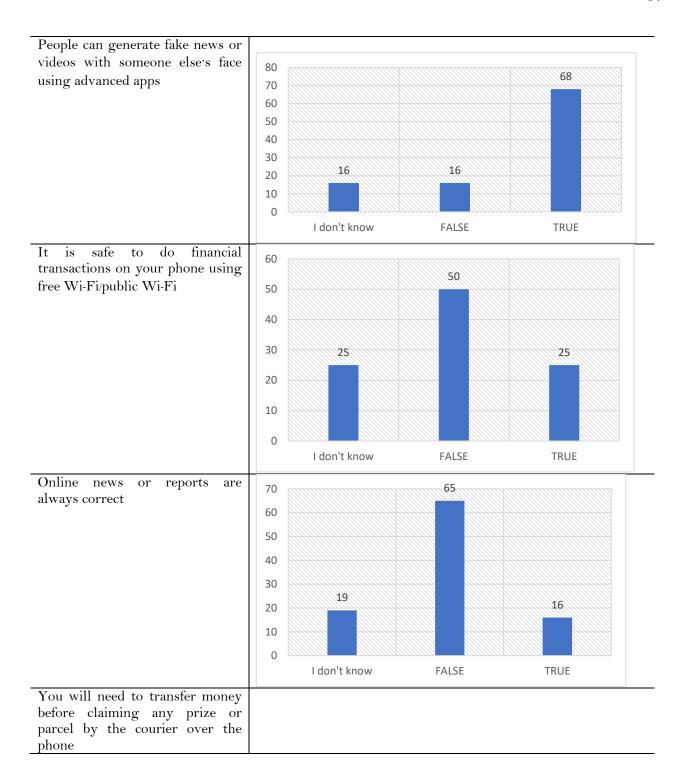
In assessing the digital competency of the aged entrepreneurs in silver economy found more than half of them feel confident and good attitude toward digital skills to be used in their silver economy's activities, though only a few got trained in this issue.

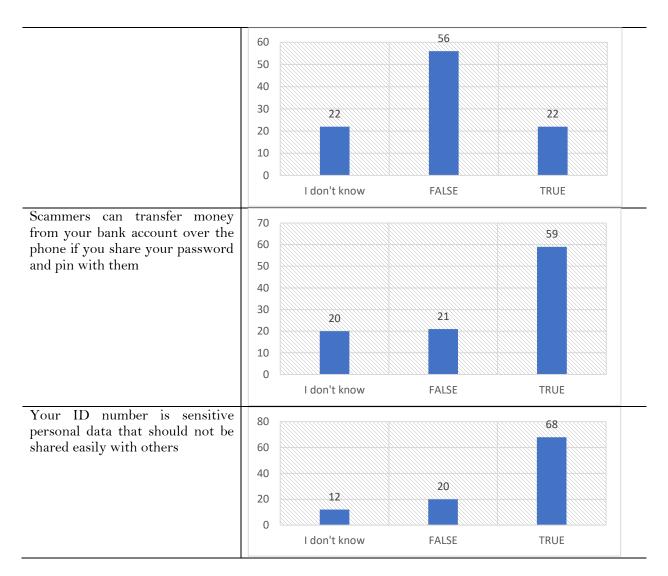
5.8.2. Digital Competency: Information Analytic Skills of the Aged Entrepreneurs in Silver Economy showed a higher level of awareness regarding the dangers of sharing information online and its potential consequences.

Table 8.

The aged entrepreneurs' analytic information skills Deleted information placed on 100 90 social media will not be seen again 80 60 40 20 9 1 0 I don't know **FALSE** TRUE You should not use your birthday 80 72 or name as your password 70 60 50 40 30 20 20 8 10 0 I don't know **FALSE** TRUE







5.9. Mechanism for Digital Competency development among the Aged Entrepreneurs under the Silver Economy with Soft Power in Thailand

As highlighted results earlier in this report, Thai government has implemented various urgent initiatives, policies, and regulations to support silver economy with all relevant sectors especially the aged entrepreneurs, the youths in their own family or community business relevant to silver economy. Key agency found to be the most important factor to drive all successful mechanism of the silver economy with soft power among the aged entrepreneurs. CEA (Creative Economy Agency, Public Organization) found to be the key agency to lead and play all important roles to make successful silver economy truly happen under the missions of silver economy, Thailand. CEA must assist and facilitate all friendly and creative ecosystem of Thai's silver economy. CEA must act as the silver economy hub to lead, to direct, to facilitate, to communicate then to support all kinds of silver economy with soft power among all sectors and targeted groups. CEA has to collaborate with all sectors i.e. the private sectors, the communities, and the local government agencies in arranging all kinds of the creative silver economy at all levels. Some examples of CEA moves with creative & silver economy engagement are;

5.9.1. Thailand Creative District Network or TCDN

A platform to build a system for provincial area development via creativity and design work, which helps add value to the existing assets, improve quality of life, and revitalize the old neighborhood with creative & silver economy engagement.

5.9.2. UNESCO Creative Cities Network or UCCN

An international city development platform that facilitates the strategic exchange of art and cultures, creativity, information, experiences, personnel, projects, and activities with other cities in the network across the world. On the international scale, it is also advantageous for city public relations in terms of commerce, investment, and tourism with creative & silver economy engagement.

5.9.3. A Platform to Demonstrate Thai Creative People's Potentials and Creative Businesses:

Design Week is considered a cultural product that boosts the local economy and generates revenue from tourism with creative & silver economy engagement (CEA,2021.https://www.cea.or.th/en/single-softpower/cea-soft-power).

6. Conclusions

One focus of this research is that building an inclusive digital nation involves leveraging the social and economic benefits of digitalization to ensure no individual, community, or business is left behind. While digital competency with communication, media, technology and innovation can enhance access to information, knowledge, skill development, business opportunities, social protection, health, financial independence, and divinity with their own soft power. Also help bridging the digital divide requires a comprehensive understanding of the barriers faced by diverse demands of the aged groups who are the rapid emerging population in Thailand. Silver economy driven by all this group calls "the aged entrepreneurs" is a must to be urgently support and empowered. So, main recommendation gains from this research is the most urgent fixed in all government policy gaps to help the aged entrepreneurs as well as other beneficiaries groups to access and gain more digital competency skills and knowledge relevant to their silver economy by Soft Power. Main mechanism is to closer government sector, private sector, and the local sectors' collaboration more kinds of supportive incentives aims to help expanding and scaling up more empowering activities such as training, sharing, and collaborating among all the aged entrepreneurs in silver economy across the country and industries. Deepen community, school, private sectors and industry links by driving formal inter-sectoral mechanism for empowerment, resources sharing, regular consultation for internship, apprenticeship, on-site training, employment, market outlet and other schemes with equity, quality and sustainable practices.

Copyright:

© 2024 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

References

- [1] Anders Skov. (2016). Digital Competency. Center of Digital Dannelse. https://digital-competence.eu/dc/ed/front/what-is-digital-competence/
- [2] Ariele Rodrigues-Ferreira. (2022). Federal Center for Technological Education of Rio de Janeiro, CEFET/RJ, Campus Nova Iguaőu,Estrada de Adrianspolis, 1317 Santa Rita Nova Iguaőu 2604–271, Rio de Janeiro, Brazil
- [3] Bangkok Post. (2023). Daily minimum wage to rise by 2.4%. https://www.bangkokpost.com/thailand/general/2701661/daily-minimum-wage-to-rise-by-2-4-
- Bamrungsin, P. (2017). Enhancement of students' innovation and learning skills for the 21st century and Thailand 4.0: A case study of Mahapajabati Buddhist College, Thailand. In Proceedings of the 5th International Scholars' Conference. Bangkok, Thailand.
- [5] Chantapong, S., & Lertpienthum, K. (2018). Skills Mismatch Traps and Challenges to Education 4.0. MPG Economic Review. https://www.bot.or.th/Thai/ResearchAndPublications/DocLib_/Article_24Jul2018.pdf

Edelweiss Applied Science and Technology ISSN: 2576-8484 Vol. 9, No.1: 10-40, 2025 DOI: 10.55214/25768484.v9i1.2241 © 2025 by the authors; licensee Learning Gate

- [6] DataReportal. (2023). Digital 2023: Thailand. https://datareportal.com/reports/digital-2023-thailand
- [7] Freedom House. (2023). Freedom on the net 2023: Thailand. https://freedomhouse.org/country/thailand/freedom-net/2023#footnote7_5k6nubp.
- [8] Intaratat, K. (2023). Elderly Labor Study in the Outskirt Cities of Thailand.
- [9] International Telecommunications Union (ITU). (2022). E-Learning in Thailand: Mapping the Digital Divide. ITU Publications.
- [10] International Telecommunications Union (ITU). (2022). Global Connectivity Report. ITU Publications.
- [11] National Statistical Office. (2018). (1st Quarter) Household Survey on the Use of Information and Communication Technology. http://www.nso.go.th/sites/2014/DocLib13/ด้านICT/เทคโนโลย์ในครัวเรือน/2....
- [12] Narain Chutijirawong. (2022). Thailand Silver Economy -Trend and Opportunities. https://www2.deloitte.com/th/en/pages/about-deloitte/articles/thailand-silver-economy-en.html
- [13] Sombatpoonsiri, J. (2022). Labelling Fake News: The Politics of Regulating Disinformation in Thailand. ISEAS Perspective, 2022/34. https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2022-34-labelling-fake-news-the-politics-of-regulating-disinformation-in-thailand-by-janjira-sombatpoonsiri/
- [14] Thai PBS (2021). Women and Youths in Southern Provinces of Thailand. https://theactive.net/data/women-and-children-in-the-south-border-of-thailand/
- The Office of the National Digital Economy and Society Commission (ONDE). (2022). Annual Report Thailand Digital Outlook. https://www.onde.go.th/view/1/รายละเอียดข่าว/ข่าวทั้งหมด/1646/TH-TH.
- [16] UNESCO. (2021). Assessing Internet Development in Thailand: Using UNESCO's Internet Universality ROAM-X Indicators. UNESCO Bangkok Office.
- United Nations. (2021). United Nations Population Fund: Country Programme Document for Thailand. https://www.unfpa.org/sites/default/files/portal-document/ENG%20-%20DP.FPA_.CPD_.THA_.12%20-%20Thailand%20CPD%20-%202022%20FRS%20-%20FINAL%20-%201Dec21_0.pdf
- United Nations Children's Fund & College of Population Studies, Social Research Institute, Chula Unisearch. (2023).

 In-depth Research on Youth Not in Employment, Education or Training (NEET) in Thailand. Bangkok: UNICEF.
- [19] United Nations ESCAP. (2019). Promoting inclusive broadband through Village Broadband Internet Project (Net Pracharat) in Thailand.
- [20] UNFPA Thailand. (2019). Ageing population presents new challenges to society's welfare https://thailand.unfpa.org/en/Thai-Family-Ageing-Society
- Thailand Investment Review, (2019). Silver Economy: Opportunities with Thailand's Growing Senior Population, Vol.29, July,2019. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.boi.go.th/upload/content/TIR_JULY2019.pdf