

## A preliminary study on timebanking awareness in Malaysia

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### ABSTRACT

The timebanking concept has been introduced to benefit from the service exchange between the service provider and requester. In essence, this concept eliminates fiat money as a payment mechanism, and the currency used is the hour the participants used to complete a task. Apart from its implementation in several other countries, the concept of timebanking is still fairly new in our communities. Thus, a user awareness survey was conducted to investigate the level of awareness of the timebanking concept among the members of the society, and also the level of willingness to participate in the timebank system. The results show that 51% of the participants assert that they are aware of the concept of a timebank. In addition, 86% of the participants stated they were willing to participate in the timebanking project. These encouraging results show that there is a possibility that the timebank concept will be acceptable to Malaysian communities in general.

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### INTRODUCTION

Timebanking was first conceptualised as coordinating volunteer activities that community members provide to one another (Cahn & Rowe, 2000). By participating in timebanking, members of the community can provide and receive services for non-monetary purposes. It allows unmarketable services, such as picking someone up from the airport, assisting the elderly, offering help to others with house repairs, or taking care of a hospital patient, to be measured and compensated with time. The time the service providers took to perform these services is credited to the service provider account, and the time is deducted from the requestor account as agreed.

The exchange is typically linked to the time currency, whose cash value equivalent may vary depending on the number of units earned or spent rather than a fixed cash value. A novel method of exchange that is

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recession-proof is timebanking (Ryan-Collins et. al., 2008). By utilising social and community networks, it has the capacity and means to deliver long-term public services (Ryan-Collins et. al., 2008).

Timebanks provide users with personal profiles containing information about their contacts and previously provided and accepted services. Timebank also gives members access to a list of service categories, such as housekeeping and childcare, to help the provider and requester to give or receive the services. The system will record the amount of time spent on these services after the recipient and service provider have completed their discussions, and timebanks will keep track of all debits and credits in terms of time units. The general timebank concept can be shown in Figure 1.

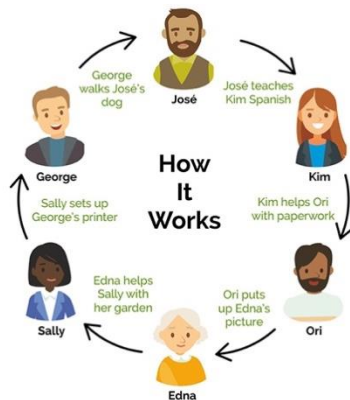


Fig. 1. How timebanking works (Source: TimeBanks USA, n.d.)

In simple terms, a timebank can be run by any community that is interested in timebanking. Initiative-driven individuals who understand the benefits of timebanking for their community are typically the ones that establish timebanks. The administrators and coordinators monitor the members in each timebank as well as the timebanking activities. To date, a local timebank can operate and administer a timebank more efficiently by using one of the software platforms that are currently accessible (Timebanks.org).

There are now a few large timebank organisations that provide web-based software solutions to replace the labor-intensive paper-based tasks that coordinators used to streamline. One of the largest timebank organisations, TimeBanks USA, created the web-based Community Weaver platform. TimeBanks USA is made up of about 250 local timebanks with over 25,000 members in North America and 13 other countries. Another nationwide non-profit organisation, hourworld, has over 20,000 members and over 190 local timebanks in addition to providing a web-based platform called Time and Talents. These timebanking solutions facilitate timebanking for coordinators and aid timebank members to operate more effectively. Members can effortlessly create and retrieve a list of requests and offers, track time credits, and set up their accounts. In addition, coordinators find it simple to oversee all of the members' activities and time credits (Clements et. al., 2017).

Cahn and Grey (2013) developed the notion of co-production with the aim of inspiring the community to take an active role in society instead of just being passive recipients of information. Stated differently, people begin creating the services they utilise, with an emphasis on those that are marginalised specifically. According to Cahn and Grey (2013), there are five principles to accomplish co-production through community participation i.e. (1) an asset perspective: everyone has something to contribute, (2) honouring real work: rewards all work, (3) reciprocity: helping to build relationship and trust, (4) social networks: giving more meaning to lives, and (5) respect: basis for healthy and loving community (Cahn, 2010, Cahn & Grey, 2013). The summary of the timebanking principles can be shown in Figure 2.

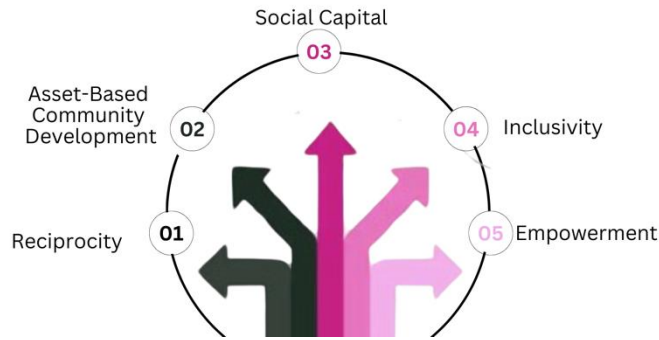


Fig. 2. Five key principles of Timebanking (Source: FasterCapital, n.d.)

This concept is in line with the United Nation's Sustainable Development Goals (SDG) where the goals being addressed are Goal 1: No Poverty, Goal 2: Zero Hunger, Goal 8: Decent Work and Economic and Goal 11: Sustainable Cities and Communities (United Nations, n.d.). By Goal 1 No Poverty, timebanks can empower individuals and communities through skill-sharing and mutual support, enabling them to overcome poverty traps and access essential services. In addition, timebanks can complement social safety nets by providing non-monetary support and building social ties. Timebanks can also bridge economic disparities by allowing members to access needed resources without financial barriers.

Timebanks can support community gardens, food redistribution programmes, and food-sharing networks based on Goal 2: Zero hunger. Through timebanks, farmers and volunteers can exchange skills related to sustainable agricultural methods. Through neighbourhood projects, timebanks can encourage waste minimisation and mindful eating. Meanwhile, for Goal 8 Decent Work and Economic Growth, timebanks can provide skill-building opportunities and micro-entrepreneurship support, leading to decent work opportunities, offer young people valuable work experience and access to mentors, also create platforms for international collaboration and exchange of expertise related to decent work. Finally, for Goal 11 Sustainable Cities and Communities, timebanks can build social cohesion and foster inclusive communities by connecting people across diverse backgrounds, support community clean-up initiatives, resource sharing, and sustainable living practices, and facilitate the maintenance and development of safe and accessible public spaces through volunteer efforts.

Timebanking is still relatively new in Malaysia, hence, to lay out the foundation of timebank in Malaysia, a group of researchers from the Institute of Labour Market Information and Analysis (ILMIA) conducted a comprehensive survey on the volunteerism culture and introduced a roadmap on the timebank implementation in Malaysia (ILMIA, 2020). Overall, the feasibility study highlighted the importance of exploring innovative approaches like timebanking to promote volunteerism among senior citizens in Malaysia. By addressing the low volunteer participation rate and leveraging the potential of timebanking, stakeholders can create meaningful opportunities for senior citizens to contribute to their communities and enhance their well-being. Timebanking was identified as a promising strategy to incentivise volunteerism among senior citizens. Timebanking operates as a complementary currency system where individuals earn time credits for volunteering, which can be later used to access goods and services. This approach aims to motivate individuals to contribute their time and skills to the community. The feasibility study assessed the feasibility implications of implementing timebank volunteering schemes for senior citizens in Malaysia. By evaluating the practicality and viability of such initiatives, the study aimed to provide insights into the potential challenges and opportunities associated with introducing timebanking for volunteerism.

In line with the ILMIA research, Muthusamy and Wan Usamah (2022) assert that there is an opportunity in Malaysia to target any timebanking scheme towards the needs of productive ageing and community-based custodial services for the elderly. In addition, they also suggested that timebanks could

be part of a comprehensive plan to provide community-based custodial care for the elderly by improving access and reducing costs through local support networks. The elderly, in this case, are viewed as beneficiaries of care services provided by community volunteers who are rewarded with time credits. In our study, the research questions that will be investigated are:

RQ1: What is the level of awareness in the community on timebank concept?

RQ2: What is the level of willingness of the community to participate in timebank?

## RELATED WORK

Internationally, the concept of Timebanking has been in practice for decades where some countries have adopted similar programmes as early as the 1970s. As of 2019, organised Timebanking exists in more than 30 countries (ILMIA, 2020). Among the countries are: USA (300 timebanks), UK (300 timebanks), Japan, Australia, Switzerland, New Zealand, Spain, South Korea, Germany, Brazil, Argentina, Italy, Hungary, France and many more.

### Timebank Models

Generally, there are several models of timebank implementations throughout the locations where the concept is adopted. Boyle listed several models of timebank that are used in various countries and communities (Boyle, 2013).

*Co-production timebanks*: This is the UK model, which is based on the ideas originally put forth by Cahn (2004). Its main goals are to create social networks and alter the dynamic between service users and professionals (such as doctors, social workers, and housing professionals). Typically, they are organised by a public service or charitable organisation with the goal of fostering mutual support. They function by enabling the trade of time for cash in exchange for assistance from neighbours (for example: Fair Shares, based in rural areas in the Cotswolds).

- (i) *Municipal timebanks*: This is the Italian and Spanish model, which originated independently from the feminist movement in Spain and is currently employed for a variety of municipally sponsored initiatives. The scope of the Spanish *bancos de tiempo* is often broader than that of the UK and includes basic economic exchanges due to the involvement of local government. This form of mutual support has been adopted, funded, and promoted by local government. Additionally, the Italian *banche del tempo* uses it as their predominant model, and attempts have been made to export it to Greece and Bulgaria. The Italian timebanks assert that they are descended from the UK timebanks, but there is proof that *banche del tempo* originated independently and that the concept originated there. Similar to co-production timebanks, these enable members to exchange time for money, but they frequently do so outside of specific institutions and frequently for social and economic transactions (for example: Banco del Tiempo del Escorial, which provides for mutual support in the town).
- (ii) *Insurance credits*: This is the Japanese model, which aims to revitalise retirement and social care through a number of integrated national systems. It prioritises elder care above all else and tends to blend regular cash with other credit systems. They are frequently managed by health centres or older people's support groups, particularly in Japan, but insurance companies are also supposed to embrace them. These compensate for time spent, with the idea that they can be accumulated as insurance—often for a long time—until individuals require them directly (for example the Fureai Kippu schemes of volunteering to support older people).

- (iii) *Reciprocal volunteering*: This is the web-based model that the UK consulting firm Slivers of Time and associates created, enabling volunteers to instantly trade credits via the internet. These are time credits that can be used to cover support costs and acknowledge the contributions of volunteers. They can be fully exchanged online (for example: Cronobank, the online volunteering facilitator).
- (iv) *Time-based currencies*: Here, social and economic exchanges converge. It includes currencies in the style of Local Exchange and Trading Systems (LETS), such as the German and Austrian Tauschring, which were initially intended to boost local economies by making better use of resources and skills. Usually, these are mutual credit systems that generate money based on time and can be utilised to support trade on a social or commercial level (for example: Talente Tauschkreis Wien, the Talente system based in Vienna in Austria).
- (v) *Reward points*: This is the concept of frequent flyer points, a national or local programme that offers incentives for specific, pre-designated behaviour that can be exchanged for more material goods (for example: Blue Dot, the youth website, or the original green behaviour card in Rotterdam, NuSpaarpas).

### Timebank Case Study

Globally, the implementation of timebanks has attracted more than 1,000 communities (Boyle, 2013). Among the timebanks that have the highest number of members (i.e. more than 300 members) are:

Table 1. Timebank case study

Timebank	Description
TimeBanks USA	TimeBanks USA is a national network that supports and promotes timebanking across the United States. It provides resources, tools, and a platform for communities to establish and manage their own timebanks.
Hour Exchange Portland (Maine, USA):	Hour Exchange Portland is a community timebank that operates in Portland, Maine. It allows members to exchange services and build a supportive network within the community.
Timebanking UK	Timebanking UK is a national charity that supports the development of timebanks in the United Kingdom. It provides guidance, resources, and a network for local timebanks to connect and share experiences.
Time Republik (Global)	Time Republik is an online platform that allows users to exchange services globally. It operates on a time-based currency system, enabling individuals to offer and receive various services across borders.
Fureai Kippu (Japan)	Fureai Kippu, translated as "Caring Relationship Tickets," is a timebanking system in Japan that originated in the 1990s. It involves earning credits by providing care services to the elderly, and these credits can be used to receive care in the future.
Zeitvorsorge (Germany)	Zeitvorsorge is a timebanking initiative in Germany. It focuses on community building and mutual support, allowing members to exchange services and strengthen social ties.
Timebanking Australia	Timebanking Australia supports the development of timebanks across the country. Various local initiatives operate within communities, fostering the exchange of services and building social capital.

### Community Acceptance

Members of timebanking, the community they serve, and society at large all gain a great deal from timebanking. It saves money for the government, gives community members access to a wide range of non-commercial services, and offers a competitive alternative to charity and government handouts (Bellotti et al., 2014). Because it depends on generating value through encouraging unpaid reciprocal community

support, it is a system that is similar to the mainstream economy (Cahn & Rowe, 2000). Timebanking boosts the local economy on a community level by increasing employment rates, lowering taxes and expenses, improving resource accessibility, and cutting down on energy and resource waste. On an individual level, it also improves members' wellbeing and sense of self-worth. Therefore, it is in the interest of society at large to investigate the determinants of timebanking participation and discover ways to enhance member participation.

Yuan et al. (2019) conducted a study on the community's acceptance of the reciprocal concept of timebank in order to understand the community's acceptance of the timebank concept. Their survey data was gathered from various timebanks in the United States. They discovered that while perceived usefulness was negatively correlated with requests and offers, perceived ease of use of timebanking platforms was positively correlated with positive attitudes towards both.

Furthermore, according to Valor et al. (2016), their research has determined the primary objectives people set for themselves when they join a timebank. It is crucial to remember that people join timebanks primarily to feel like they belong to a community, to advance equality and justice, and to acquire new or improved skills—not for financial gain. Parallel to this, Kakar (2018) investigated a number of timebanks in the United States and found that community members find it more fulfilling to provide services than to request them. In fact, one of the driving forces behind the implementation of timebanking is the potential for community contribution.

A study by Bellotti (2014) et al. looked into the possibility of using user experience design for timebanking systems to address a variety of issues pertaining to community timebank implementation. Additionally, Eskelinen and van der Wekken (2022) examined the reasons why people join timebanks in Finland and found that the following factors contribute to timebank adoption: 1) social reasons, such as the desire to get to know one's neighbours; 2) economic reasons, such as having a limited income and seeking out alternative forms of subsistence; and 3) political reasons, such as the desire to work towards the establishment of an alternative financial system.

A study by Eskelinen and Venäläinen (2021) explored economic moralities in self-organised alternative economies and argues that the diverse economies approach is particularly useful in elaborating the self-understandings of such economic communities, including timebanking. Another work, Lu et al. (2024) applied a case study to describe the features of an innovative timebank project, *Good Hands*, and explored the underlying mechanism of engaging older adults as volunteers in the social care sector. Three focus groups were conducted with 12 older adults' volunteers, and six advisory group members.

Similarly, Kim (2019) identified the various problems faced by elderly people in Gangwon-do and examined the Timebank system as a way to improve social welfare services to manage the community's health. He found that the timebank concept is suitable to be implemented in the respective province and also the other provinces in South Korea.

Other timebank implementations are also reported in China. In particular, Wu et al. (2021) investigated the participation willingness of online timebank elderly care, especially to discover different influencing factors on the participation willingness between the youth group and the elderly group. Their findings are: First, the health status of elderly people and the number of elder families of young people have significant positive impacts on their willingness to participate in online timebank. Second, the experience of participating in voluntary activities has a significant positive effect and it has a far greater impact in the young group than that in the elderly group. Third, the more the free time, the higher the participation willingness in the young group, but it is the opposite in the elderly group. Fourth, the years of education and party member have significant promoting effects on the participation willingness in both groups.

## METHODOLOGY

This research is a quantitative study and the data collection tool used is a survey. This methodology is chosen because it is the most suitable to answer our research questions in the Introduction section. The research methodology consists of four phases as presented in Figure 3.

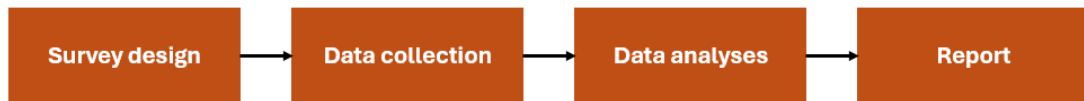


Fig. 3. Research methodology

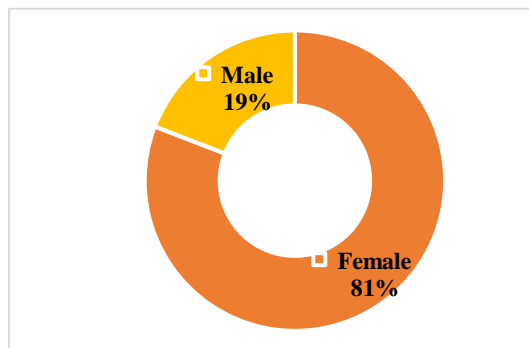
The question items in the survey were designed to answer the research questions, which are 1) the level of awareness of the timebank concept in the community, and 2) the level of willingness to participate in a timebank system. Data collection took place once the survey design had been completed, and necessary changes were done on the instruments. As this study is a preliminary study on timebanking, data was collected from two sample populations, namely the communities of two higher educational institutions, which are International Islamic University Malaysia (IIUM) and Kolej Universiti Islam Perlis (KUIP). 300 surveys were distributed online, and 183 were returned and analysed in this study.

## RESULTS

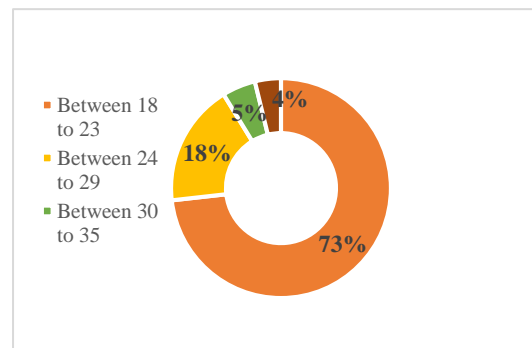
The following section discusses the results and findings from the collected data. The results are divided into four categories which are: demographic, the awareness for the need of timebank in community, the view of the respondent on timebank implementation and volunteerism.

### Demographic

The demographics presented in Figure 4(a) shows that more than 80% of the respondents are female, and the remaining are male. The unbalanced distribution between the two genders is not new, as a similar distribution was reported by Kakar (2018). While in terms of age, Figure 4(b) depicts that out of the 183 respondents, 73% are between 18 and 23 years old, 18% are between 24 and 29 years old, and the lowest percentage is over 40 years old at 4%.



(a) Gender of the respondents



(b) Age of respondents

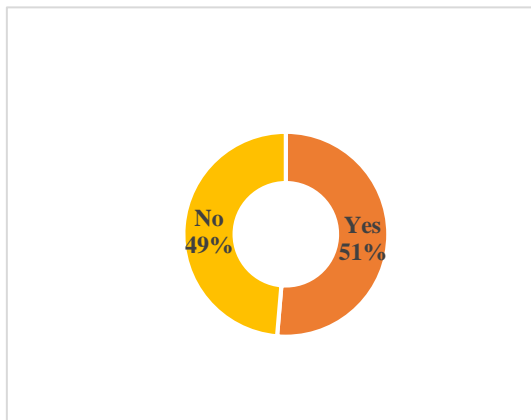
Fig. 4. Demographic distributions

**Awareness of the need for a timebank in the community**

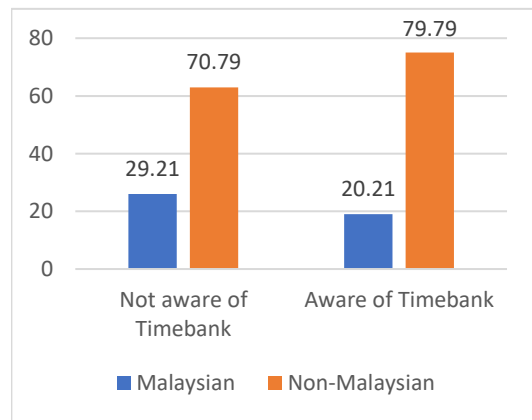
RQ1: What is the level of awareness in the community on timebank concept?

For the purpose of answering RQ1, the following questions are given to the respondents.

One of the important data collections in this study is the survey of community awareness of the needs of the timebank in their environment. The question on the awareness shows that respondents have some knowledge of blockchain and the need for a timebank. A balanced distribution of individuals who are and are not aware of the necessity for a time account is depicted in Figure 5(a). In addition to the distributions, Fig. 5(b) shows further details on the level of awareness, indicating that about 80% of the respondents are non-Malaysians, and it is also clear that the distribution of the level of awareness of the need for a time account is almost the same for both Malaysians and other nationalities.



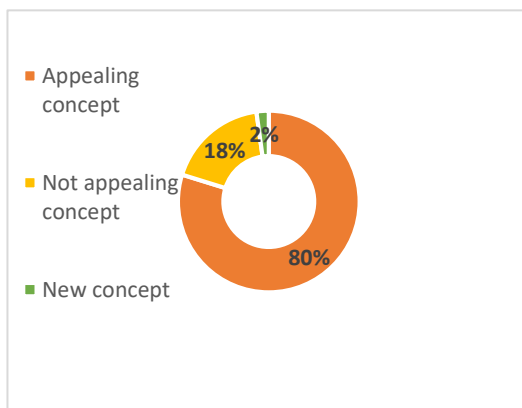
(a) Number of participants who are aware on the need of timebank



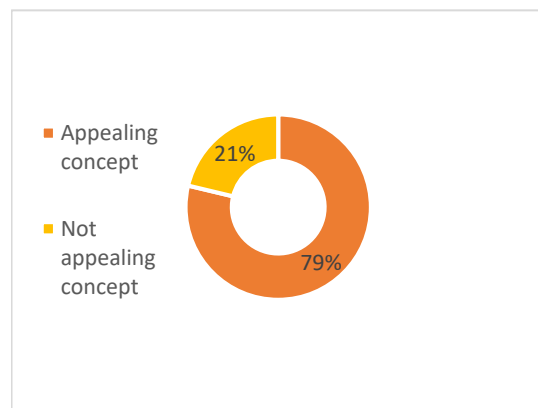
(b) Timebank awareness between nationalities

Fig. 5. Timebank awareness

**View on Timebank**



(a) View of timebank concept



(b) Time as currency

Fig. 6. View of Timebank concept

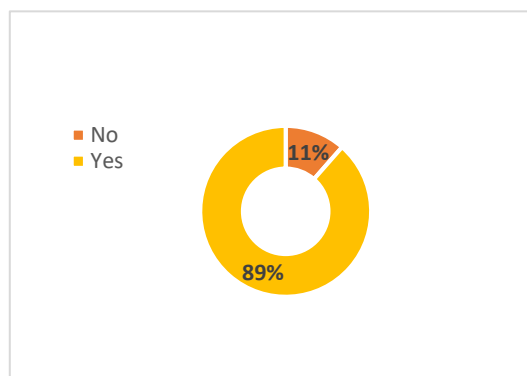


Generally, approximately 80% of the respondents agreed that using time as currency instead of money is a considerably accepted concept. In comparison, 18% found that timebank is not an appealing concept to be introduced to the community, as shown in Figure 6(a). The distribution of timebank as an appealing concept shows a high chance that timebank will be able to get the young adult's interest to be part of the timebank ecosystems. In addition to the view of the timebank, Figure 6(b) shows that 79% of the respondents see that time as a currency for transactions instead of fiat money such as Malaysia Ringgit (MYR) is an appealing concept, which shows that timebank is a promising concept to be implemented in the future.

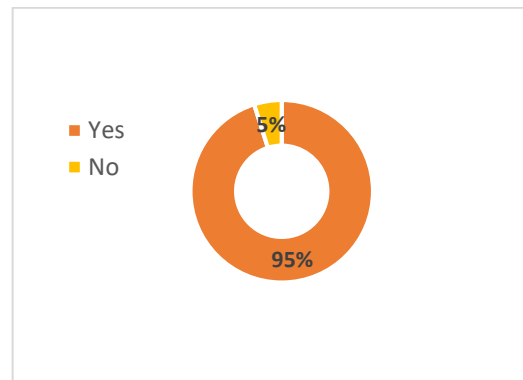
### Benefits of Timebank

The following section discusses the benefits of timebank.

Figure 7(a) shows how respondents see timebanks to emphasise the value of managing and using time effectively. In addition, Figure 7(b) shows that almost 100% of the respondents agree that participating in various activities together can help to strengthen the community and improve social relationships.



(a) Timebank concept promote the importance of time



(b) Timebank activities strengthen the social relationships

Fig. 7. Benefits of Timebank

Figure 8(a) indicates that 70% of the respondents agree that talents and skills are appropriate product in timebank concept. In addition, 84% of the respondents indicate that timebank is a concept that can bring together a community from a similar social class be together, help each other and contribute to the sustainability of a community. This can be seen in Figure 8(b).

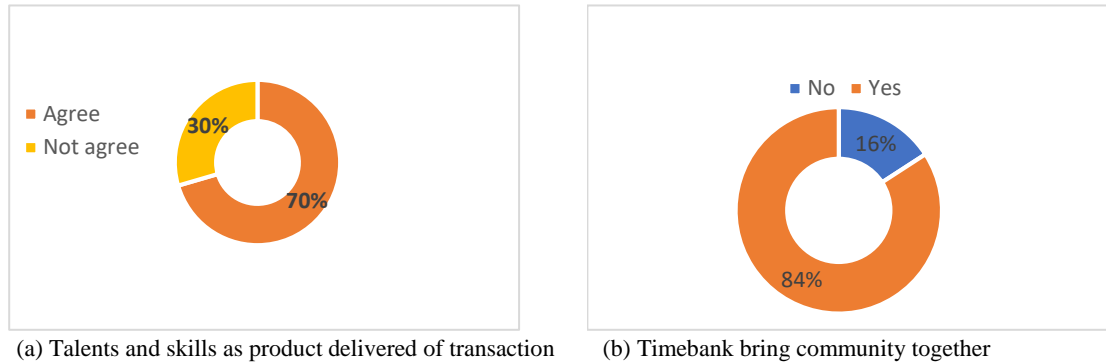


Fig. 8. Benefits of Timebank (2)

### Volunteerism

RQ2: What is the level of willingness of the community to participate in timebank?

In order to answer RQ2, these questions were given to the respondents.

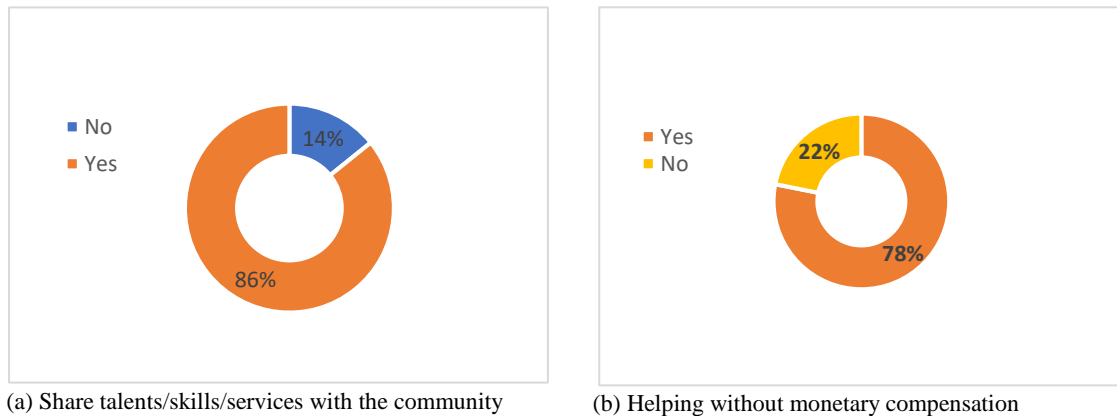


Fig. 9. Volunteerism concept

Based on Fig. 9(a), 86% of the respondents positively responded to their willingness to share their skills/talents/service to the community. The result indicates that only 14% of respondents do not agree to share their skills/talents or giving services, which shows that most respondents are those who positively accept volunteerism in the timebank concept. On top of the agreement on volunteerism, Fig. 9(b) illustrates that 78% of the survey respondents willingly help without monetary compensation.

### DISCUSSION

Based on the preliminary investigation, there is positive feedback from the participants that shows a significant percentage of respondents are willing to volunteer, especially younger generations. Making a positive influence and contributing to worthy causes were found to be important sources of motivation for people seeking social impact. Furthermore, responders' value being acknowledged, while some are willing to volunteer even in the absence of a token of appreciation. Nevertheless, the support system, particularly

for organisers or requesters, might be facilitated by having a transparent time credit exchange and a centralised platform to manage all pertinent transactions. The researchers in ILMIA recommended eleven key elements that should be implemented in order to adopt the timebank concept in Malaysia, as shown in Figure 10.












Key elements	Options				Details
 Time Banking model	One-to-one	One-to-many	Many-to-many		Focus on credits held by persons and NGOs
 Traded currency	Hour-for-hour time credit		Varied credits / hour		Equal value for tasks and effort
 Geographic coverage	District	State	National	International	National but rolled-out in phases
 Eligibility criteria	Open to all ages		18 years and above	60 years and above	Limited to 18 for safety and security reasons
 Platform host	Government (Non-profit)	Government (For-profit)	PPP	Private (Non-profit)	Higher credibility and less cost
 Funding mechanism	Government-funded		PPP	Privately-funded	Government to provide initial funding
 Registration process	Online only		Online and offline	Offline only	Wider coverage for those that are / are not computer savvy
 Redemption eligibility	No specific criteria		Limited to specific age	Limited to specific hours	Redemption-savings ratio imposed up to a certain age
 Redemption mix	Service-in-kind	Goods	Discount coupons	Cash or cash equivalent	Limited to services and basic necessities
 Redemption transferability	Non-transferable		Transferable among members		Transferable across individuals
 Redemption expiration date	No expiry date		Limit to specific criteria		No expiry due to redemption limitations and to encourage more to volunteer

Fig. 10. ILMIA Recommendation for Malaysian Timebank (ILMIA, 2020)

The key elements suggested in Figure 10 should be carefully planned in order to find the best ones to be implemented in Malaysia. For example, Timebanking model, Eligibility criteria, Platform host, Funding mechanism, and Registration process need to be thoroughly investigated before the implementation in the society.

The proposed timebanking scheme focuses on a one-to-one and one-to-many model, enabling credit exchanges between individuals and between individuals and organizations like NGOs. It utilizes an hour-for-hour time credit system, where one hour of volunteer work equals one credit, ensuring equal value for all tasks. The scheme aims for national coverage with a phased roll-out and limits participation to those 18 and older for safety reasons. A university or research institution is suggested as the platform host to enhance credibility and reduce government start-up costs. Initial funding will be provided by the government, but the scheme seeks to become self-sustaining through a Public-Private Partnership (PPP) model. Registration will be available both online and in person to ensure broad accessibility. Participants can redeem time credits for services or essential goods, and credits can be transferred among members to support those in need.

Implementing timebanking as a socio-economic development strategy comes with its own set of challenges and limitations (Institute of Labour Market Information and Analysis, 2020):

- (i) **Limited Scale:** Timebanking may face challenges in scaling up to meet the needs of larger communities or regions. As the number of participants grows, coordinating exchanges and ensuring fairness can become more complex.
- (ii) **Sustainability:** Ensuring the long-term sustainability of timebanking initiatives can be a challenge. Maintaining interest and participation levels among members over time requires ongoing effort and resources.

- (iii) **Equity and Inequality:** There is a risk that timebanking may inadvertently reinforce existing inequalities within communities. Those with more time or skills to offer may benefit more, while marginalised groups may struggle to participate equally.
- (iv) **Resource Allocation:** Timebanking relies on the voluntary contribution of time and skills. Ensuring a balance in the types of services exchanged and preventing over-reliance on certain individuals can be a challenge.
- (v) **Technology and Access:** Web-based timebanks, while offering convenience, may exclude individuals who lack access to technology or digital literacy skills. Ensuring inclusivity and accessibility for all community members can be a limitation.
- (vi) **Evaluation and Impact Measurement:** Assessing the impact and effectiveness of timebanking initiatives in achieving socio-economic development goals can be challenging. Developing robust evaluation frameworks to measure outcomes and benefits is crucial.

Addressing these challenges and limitations requires careful planning, community engagement, and ongoing evaluation to ensure that timebanking initiatives effectively contribute to sustainable community-based socio-economic growth and development.

### BUDI App

For the purpose of enabling the transactions of the timebank exchange, we have developed a mobile app, known as BUDI app. The innovation component contributed by the BUDI app is the elimination of fiat money as the method of payment. Alternatively, the currency used in this system is the time spent by a member of the community (service provider) to complete a task requested by another member of the community (service requestor). The time can be deposited into BUDI and later, can be withdrawn to request for any task provided by other members of the community. For example, a member can offer a carpentry service and deposit the time spent to the BUDI system and later, he/she can request for a dentistry service and pay using the time deposited in the timebank.

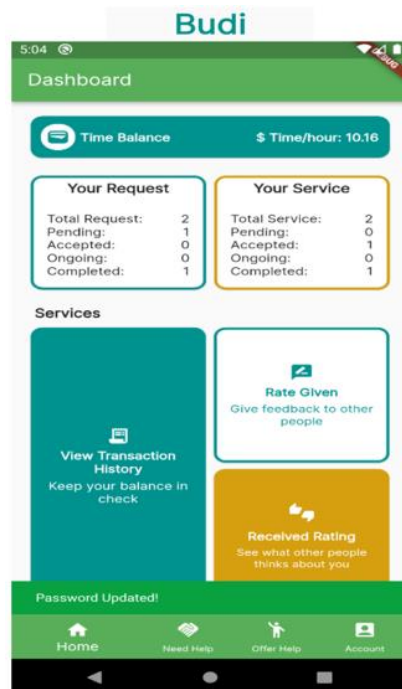


Fig. 11. BUDI app

The BUDI app manages transaction records between the service providers and service requesters. Fig. 11 depicts one of the BUDI app interfaces, which is the Dashboard. This interface displays the points acquired by the user and the summary of the transaction history for all the previous provider and requestor transactions.

The BUDI app captures the necessary concepts of timebank and will be the primary tool to implement the important processes in the timebank adoption in the community. The members of the community can identify their skills to be offered to other community members, and they also may request for services and pay using the time currency.

## CONCLUSION AND FUTURE WORK

This study is an initial exploration into Malaysians' awareness of the timebanking concept. In order to raise knowledge and comprehension of volunteering in Malaysia, more effective strategies are required. This could entail using conventional media in addition to digital platforms, partnering with community groups, holding educational materials, and launching focused communication initiatives.

The key elements suggested in the discussion section should be carefully planned in order to find the best ones to be implemented in Malaysia. For example, timebanking model, eligibility criteria, platform host, funding mechanism, and registration process need to be thoroughly investigated before the implementation in the society.

In the future, this work will be extended to apply our mobile app in more communities, and simultaneously, study its impact in the larger community engagement projects. Larger community members shall be included in the implementation of the timebank scheme and shall be measured for the profiling and data management purposes.

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## CONFLICT OF INTEREST STATEMENT

The authors agree that this research was conducted in the absence of any self-benefits, commercial or financial conflicts and declare the absence of conflicting interests with the funders.

## AUTHORS' CONTRIBUTIONS

Normi Sham Awang Abu Bakar carried out the research, wrote and revised the article. Norzariyah Yahya conceptualised the central research idea and provided the theoretical framework. Norbik Bashah Idris designed the research, and supervised research progress; Azlin Nordin, and Madidah Abdul Aziz anchored the review, revisions, and approved the article submission.

## REFERENCES

Bellotti, V., Cambridge, S., Hoy, K., Shih, P. C., Handalian, L., Han, K., and Carroll, J. M. (2014). Towards community-centered support for peer-to-peer service exchange: Rethinking the timebanking metaphor. In *CHI 2014: One of a CHInd - Conference Proceedings, 32<sup>nd</sup> Annual ACM Conference on Human Factors in Computing Systems* (pp. 2975–2984). Association for Computing Machinery. <https://doi.org/10.1145/2556288.2557061>.

- Boyle, D. (2013). *The potential of timebanks to support social inclusion and employability: An investigation of the use of reciprocal volunteering and complementary currencies for social impact* (Report no. EUR 26346 EN). Joint Research Centre. <https://op.europa.eu/en/publication-detail/-/publication/7268e799-529e-4148-9154-68d22b83b28d/language-en>
- Cahn, E.S. and Rowe J. (2000). *Time dollars: the new currency that enables Americans to turn their hidden resource— time – into personal security and community renewal*. Rodale Press.
- Cahn, E. S. (2004). *No more throw-away people: The co-production imperative*. Essential books.
- Cahn, E. S. (2010). Co-production 2.0: Retrofitting human services programs to tap the renewable energy of community. *Community Currency Magazine* (March-April), 36–39.
- Cahn, E. S. and Gray, C. (2013). Co-production from a normative perspective. In V. Pestoff, T. Brandsen and B. Verschuere (eds.) *New public governance, the third sector, and co-production*. Routledge.
- Clements, N., Holbrook, A, Forster, D., Macneil, J, Smith, M., Lyons, K. and McDonald, E. (2017). Time-banking, co-production and normative principles: putting normative principles into practice. *International Journal of Community Currency Research*, 21(Winter), 36–52. <https://doi.org/10.15133/j.ijccr.2017.004>
- Eskelinen, T. and Venäläinen, J. (2021). Economic moralities in self-organised alternative economies: the Finnish cases of ridesharing and timebanking. *International Journal of Sociology and Social Policy*, 41(5/6), 657–672. <https://doi.org/10.1108/IJSSP-11-2019-0241>
- Eskelinen, T. and Van der Wekken, R. (2022). Politics, pedagogies and commoning: Reflections from the Helsinki Timebank. *International Journal of Community Currency Research*, 26(1), 22–29 <https://doi.org/10.15133/j.ijccr.2022.002>
- FasterCapital. (n.d.). The philosophy and principles of time banking. FasterCapital. <https://fastercapital.com/topics/the-philosophy-and-principles-of-time-banking.html>
- Institute of Labour Market Information and Analysis (ILMIA) (2020). Catalysing Volunteerism in Malaysia - Feasibility Study: The Implementation of Timebank Volunteering Schemes for Senior Citizens in Malaysia. <https://www.ilmia.gov.my/index.php/en/component/zoo/item/catalysing-volunteerism-in-malaysia-feasibility-study-the-implementation-of-time-bank-volunteering-schemes-for-senior-citizens-in-malaysia-2>
- Kakar, A. K. (2018). Investigating factors that promote time banking for sustainable community based socio-economic growth and development. *Computers in Human Behavior*, 107, 105623. <https://doi.org/10.1016/j.chb.2018.07.034>
- Kim, H. K. (2019). Exploring social innovation and timebank: Focus on the elderly healthcare in the gangwon province. *Asian Journal of Innovation and Policy*, 8(2), 208–237. <https://doi.org/10.7545/ajip.2019.8.2.208>
- Lu, S., Chui, C., and Lum, T. (2024). Facilitating volunteer engagement among older adults in social services: A case study of an innovative timebank program in a Chinese society. *The Gerontologist*, 64(1), gnad010. <https://doi.org/10.1093/geront/gnad010>
- Muthusamy, N. and Wan Usamah, W. A. (2022). *Exploring the potential of timebanks in an ageing Malaysia*. Khazanah Research Institute. <https://www.krinstitute.org/assets/contentMS/img/template/editor/Views%20-%20Exploring%20the%20Potential%20of%20Time%20Banks%20in%20an%20Ageing%20Malaysia,%20Nithiya%20Muthusamy%20and%20Amirah%20Wan%20Usamah.pdf>

Ryan-Collins, J., Stephens, L. and Coote, A. (2008) The new wealth of time: How timebanking helps people build public services. *International Journal of Community Currency Research*, 13, 95-97. <https://doi.org/10.15133/j.ijccr.2009.008>

TimeBanks USA. (n.d.). *Building the timebank movement*. <https://www.timebanks.org/>

United Nations. (n.d.). *The 17 goals*. United Nations Department of Economic and Social Affairs. <https://sdgs.un.org/goals>

Valor, C. and Papaoikonomou, E. (2016). Time banking in Spain: Exploring their structure, management, and users' profile. *Revista Internacional de Sociología*, 74(1), e028. <https://doi.org/10.3989/ris.2016.74.1.028>

Wu, Y., Ding, Y., Hu, C., and Wang, L. (2021) The influencing factors of participation in online timebank nursing for community elderly in Beijing, China. *Frontiers in Public Health*, 9, 650018. <https://doi.org/10.3389/fpubh.2021.650018>

Yuan, C.W., Hanrahan, B.V. and Carroll, J.M. (2019), Assessing timebanking use and coordination: implications for service exchange tools, *Information Technology & People*, 32(2), 344-363. <https://doi.org/10.1108/ITP-09-2017-0311>



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