

Short Communication

Integrating Remittance Literacy and Village Spatial Policy for Migrant Worker Families: Community Service with PCIM Taiwan

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This article contributes to:



Abstract. Remittances can support household welfare and rural investment, yet productive use of migrant earnings may create new risks when families lack financial capability or information on land-use, environmental, and business regulations. This community service program integrated financial literacy, environmental and village spatial policy socialization, micro-enterprise planning, and family reintegration support for Indonesian migrant workers in Taiwan and their families in home villages. The program was implemented online from January to May 2023 with PCIM Taiwan and involved 30 participants. Five sessions totaling 7.5 contact hours used short expert inputs, case-based discussion, applied worksheets, a business-planning clinic, and family planning activities. All participants completed the financial-literacy pre- and post-test. Across four assessed dimensions, the unweighted composite score increased from 55.5% to 81.5%; the largest gain was in saving orientation and risk awareness (+33 percentage points). Participants also examined environmentally appropriate enterprise options and used a land-use screening guide to connect business decisions with spatial designation, agricultural-land protection, environmental requirements, and business licensing. The program shows that remittance education can be strengthened by moving beyond household finance alone and linking financial decisions to the regulatory and ecological conditions of village investment. Longer-term evaluation is still required to determine whether planned enterprises were established and whether changes in financial and land-use practices were sustained.

Keywords: Remittances, Migrant Worker Families, Financial Literacy, Spatial Policy, Environmentally Friendly Enterprise.

1. Introduction

Remittances are a major source of household income in migrant-sending communities, but their long-term development effects depend on how funds are allocated between consumption, savings, housing, education, and productive investment [1]. Because many labor migrations are temporary, return and reinvestment decisions are an expected phase of the migration cycle rather than an exceptional event [2]. In Indonesia, these decisions also alter household roles and economic strategies across geographically separated family members [3]. The migration–development relationship is therefore mediated by the institutional environment in which migrant resources are used [4]. This issue becomes especially important when remittances are converted into land purchases or village enterprises. Land use is governed by spatial-planning requirements [5], environmental protection rules [6], and safeguards for sustainable agricultural land [7]. Enterprise establishment also intersects with the risk-based licensing framework [8]. Migrant families may therefore face a double information gap: they must make sound financial decisions while also ensuring that planned investments are spatially, environmentally, and administratively appropriate.

Financial literacy provides a first layer of capability because it influences budgeting, saving, risk evaluation, and the use of financial services [9]. The OECD/INFE framework similarly treats financial literacy as a combination of knowledge, skills, attitudes, and behavior [10]. However, financial capability alone does not answer whether a proposed enterprise has a realistic market, resource base, cost structure, or regulatory fit. Practical business-model tools can help participants structure these questions [11], while return-

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preparedness theory highlights the importance of planning before migration resources are irreversibly committed [12].

This program therefore combined policy literacy with financial and enterprise education rather than treating them as separate topics. Adult-learning principles supported the use of participants’ own decisions and experiences as the basis for discussion [13], and program evaluation was organized through a multi-level training-evaluation framework [14]. Because business-training effects are often heterogeneous and may not translate directly into income gains [15], the program focused on planning quality and risk awareness rather than claiming immediate enterprise success.

2. Method

The program was implemented from January to May 2023 in partnership with PCIM Taiwan. Thirty participants were recruited through the partner network from Indonesian migrant workers in Taiwan, family members in home villages, returned migrants, and partner facilitators; category-specific participant numbers were not separately recorded. Delivery used synchronous videoconference sessions supported by digital materials circulated through PCIM Taiwan communication channels. Sessions were scheduled around workers’ rest days and considered the time difference between Taiwan and western Indonesia. The intervention used five linked learning modules. Table 1 presents the content and practical instrument associated with each module. This design was intended to move participants from remittance allocation, to policy screening, to enterprise comparison, to business-model planning, and finally to family and reintegration planning.

Table 1. Learning modules and applied instruments

Module	Core content	Worksheet/instrument
Remittance management	Household cash flow, purpose-based allocation, emergency reserve, transfer channels, fraud awareness	Remittance-allocation worksheet; financial-literacy test
Environmental and spatial policy	Spatial planning, protected agricultural land, environmental compliance, village authority, licensing	Land-use screening guide; policy-awareness items
Environmentally friendly enterprises	Village enterprise options, environmental benefits and risks, peer testimony	Enterprise comparison matrix
Micro-business planning	Business Model Canvas, assumption testing, cash flow, licensing, partnerships	Business Model Canvas; feedback rubric
Reintegration and family planning	Shared remittance agreement, return timeline, family roles, network mapping	Family agreement; return timeline; satisfaction feedback

Program evaluation combined descriptive pre- and post-test comparison, participant feedback, review of business-model outputs, and qualitative interpretation of discussion notes. The financial-literacy instrument covered knowledge, planning and budgeting skills, attitudes toward saving and risk, and intended behavior. No inferential test is reported here because the source program records do not provide a verified statistical-test output. Early behavior was assessed through worksheets and plans, whereas actual enterprise outcomes were explicitly treated as beyond the reporting period. Participants were informed that the program provided general education rather

than individualized legal, investment, or licensing advice. Actual income, savings, and debt figures were not required, and reporting used aggregated information.

3. Result and Discussion

3.1 Improvement in remittance-related financial capability

All 30 participants completed the pre- and post-test. Table 2 shows improvement across each measured dimension. A simple unweighted average of the four percentage-based indicators increased from 55.5% before the program to 81.5% afterward, equivalent to a 26-percentage-point descriptive gain. The strongest improvement occurred in financial attitudes, including saving orientation, longer-term planning, and caution toward risky offers. The pattern supports the use of applied financial education for migrant households because remittance decisions are recurring, high-frequency choices rather than abstract financial topics. It also suggests that combining allocation worksheets with discussion of transfer costs, emergency reserves, and fraud can make financial-literacy content immediately relevant. Nevertheless, intended behavior remains an intermediate outcome; whether households actually maintained emergency savings or changed remittance-allocation practices requires follow-up.

Table 2.
Financial-literacy
results

Dimension	Pre-test	Post-test	Change
Financial knowledge	58%	82%	+24 pp
Financial skills	55%	80%	+25 pp
Financial attitudes	52%	85%	+33 pp
Intended behavior	57%	79%	+22 pp
Unweighted composite of the four percentage indicators	55.5%	81.5%	+26 pp

3.2 Linking enterprise planning to land-use and environmental compliance

A central contribution of the program was to make land and regulation part of enterprise planning. Rather than asking only whether a business could generate income, participants were encouraged to ask whether the proposed land use was compatible with spatial designation, whether productive agricultural land was protected from conversion, whether environmental requirements applied, and whether the business required formal registration. Table 3 summarizes the screening logic used before participants committed remittance funds to land-based enterprise ideas. This policy-literacy component is important because a financially attractive idea may still be unsuitable if it creates land-use conflict, environmental risk, or licensing problems. By linking the screening questions directly to investment decisions, the program translated complex regulation into a practical pre-investment checklist. This approach also made environmental responsibility operational rather than rhetorical.

Table 3. Pre-
investment land-
use and
compliance
screening guide

Screening question	Purpose	Information source
Is land title and ownership clear?	Reduce dispute and transaction risk	Land office, village government, land deed official/notary
What is the parcel designation in the applicable spatial plan?	Check compatibility between intended use and spatial designation	Local spatial-planning/public works office
Is the land protected sustainable agricultural food land?	Avoid prohibited or restricted conversion	Local agriculture office and spatial-plan information
Does the activity require environmental documents or permits?	Match compliance requirements to environmental risk	Local environment office and licensing system

Screening question	Purpose	Information source
Could water, waste, odor, or access affect neighbors?	Anticipate community and environmental externalities	Village government and affected community
Has business identification and sector licensing been arranged?	Reduce legal risk and improve access to formal support	Online licensing system and one-stop service

3.3 Environmentally oriented enterprise choices and family reintegration

Participants discussed enterprise archetypes including integrated farming and agroforestry, hydroponic or organic vegetables, waste processing, freshwater aquaculture, community-based tourism or homestays, and local food processing. Each option was examined not only for market potential but also for ecological rationale, spatial fit, and operational risk. This broadened the conventional business-planning exercise by adding compliance and environmental filters before capital allocation. The final module reconnected these enterprise decisions to the transnational household. Workers abroad and family members at home often occupy different roles in earning, holding, and spending remittances. Shared planning therefore helped align investment expectations and return timelines. This aspect is consistent with return-preparedness logic [12] because planning becomes more credible when household roles, land conditions, and available support networks are clarified before the migrant returns.

3.4 Program evaluation and limitations

At the reaction level, participant feedback emphasized the practical value of applied examples and simple allocation tools. At the learning level, financial-literacy scores improved, while policy sessions produced greater familiarity with where land-status, spatial-plan, environmental, and licensing information should be checked. At the early behavior level, the program generated business-model worksheets, land-use screening exercises, and family planning outputs. At the results level, enterprise establishment and longer-term livelihood effects remained outside the reporting period, which is consistent with the distinction between immediate learning and eventual results in the evaluation framework [14]. The main limitations were online delivery, demanding participant work schedules, uneven digital access among family members in Indonesia, and incomplete category-level recording of participant profiles and policy-awareness scores. Future programs should combine online sessions with village-based policy clinics, document local regulations more specifically, and conduct tracer evaluation at three, six, and twelve months to verify actual enterprise implementation and land-use compliance.

4. Conclusion

This community service program shows that remittance education can be strengthened when financial literacy is integrated with spatial-policy awareness, environmental screening, enterprise planning, and family reintegration. The 30 participants demonstrated clear short-term gains in financial-literacy indicators and used practical tools to evaluate how remittance-funded enterprises could fit local land-use and compliance conditions. The program's main contribution is an integrated decision framework: families are encouraged to ask not only whether they can afford an investment, but also whether the proposed activity is legally suitable, environmentally responsible, operationally realistic, and aligned with household return plans. Future implementation should retain this integrated structure while adding locally specific regulatory guidance and longitudinal monitoring of actual enterprise and land-use outcomes.

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6. Declaration

Author contributions and responsibilities - The authors made substantial contributions to the conception and design of the study. The authors were responsible for the data analysis, interpretation, and discussion of the results. The authors read and approved the final manuscript.

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7. References

- [1] R. H. Adams Jr., "Evaluating the economic impact of international remittances on developing countries using household surveys: A literature review," *Journal of Development Studies*, vol. 47, no. 6, pp. 809–828, 2011.
- [2] C. Dustmann and J.-S. Görlach, "The economics of temporary migrations," *Journal of Economic Literature*, vol. 54, no. 1, pp. 98–136, 2016.
- [3] G. Hugo, "Effects of international migration on the family in Indonesia," *Asian and Pacific Migration Journal*, vol. 11, no. 1, pp. 13–46, 2002.
- [4] H. de Haas, "Migration and development: A theoretical perspective," *International Migration Review*, vol. 44, no. 1, pp. 227–264, 2010.
- [5] Republic of Indonesia, Law No. 26 of 2007 on Spatial Planning, 2007.
- [6] Republic of Indonesia, Law No. 32 of 2009 on Environmental Protection and Management, 2009.
- [7] Republic of Indonesia, Law No. 41 of 2009 on Protection of Sustainable Agricultural Food Land, 2009.
- [8] Government of Indonesia, Government Regulation No. 5 of 2021 on the Implementation of Risk-Based Business Licensing, 2021.
- [9] A. Lusardi and O. S. Mitchell, "The economic importance of financial literacy: Theory and evidence," *Journal of Economic Literature*, vol. 52, no. 1, pp. 5–44, 2014.
- [10] OECD, OECD/INFE 2020 International Survey of Adult Financial Literacy. Paris, France: OECD Publishing, 2020.
- [11] A. Osterwalder and Y. Pigneur, *Business Model Generation*. Hoboken, NJ, USA: Wiley, 2010.
- [12] J.-P. Cassarino, "Theorising return migration: The conceptual approach to return migrants revisited," *International Journal on Multicultural Societies*, vol. 6, no. 2, pp. 253–279, 2004.
- [13] M. S. Knowles, E. F. Holton III, and R. A. Swanson, *The Adult Learner*, 8th ed. London, U.K.: Routledge, 2015.
- [14] D. L. Kirkpatrick and J. D. Kirkpatrick, *Evaluating Training Programs: The Four Levels*, 3rd ed. San Francisco, CA, USA: Berrett-Koehler, 2006.
- [15] D. McKenzie and C. Woodruff, "What are we learning from business training and entrepreneurship evaluations around the developing world?," *World Bank Research Observer*, vol. 29, no. 1, pp. 48–82, 2014.

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