Factor Analysis for an Online Effective Training Model: Economic and Social Remittances Utilization of Indonesian Migrant Workers

Deni Danial Kesa[1*]

[1]Finance and Banking Laboratory, Vocational Education Program, Universitas Indonesia

*Email: d.danial@ui.ac.id

Abstract. A holistic evaluation of training programs for migrant workers is critical for creating policies to help financial institutions increase awareness of workers' remittances. This paper proposed research and development using the Five Phase Spiral Design Teaching Model. Indonesian migrant workers' viewpoints on the usefulness and role of financial institutions and training were investigated through a case study, and the results were used to create a specific model for effective training. The findings suggest that the government should provide training to prospective migrants. Furthermore, financial institutions should provide training before departure so that migrant workers can develop their understanding of living in a foreign country and should provide a range of financial services related to economic and social remittances.

Keywords: training, migrant workers, social remittances, remittance economy, entrepreneurship

1   Introduction

According to the Constitution of the Republic of Indonesia, the state is obligated to protect all Indonesian people and the country of Indonesia, and to work toward the general welfare of all. Under the management of rights and equal opportunities to obtain employment, this constitutional mandate was actualized in Act No. 39 of 2004 concerning the Placement and Protection of Indonesian Workers Abroad. The act states that the state guarantees and protects the rights of citizens who work, both at home and abroad, based on the principles of equality, democracy, social justice, gender equality, anti-discrimination, and anti-trafficking, to realize their general welfare. Various government regulations and guidelines address managerial activities concerning Indonesian workers or Indonesian migrant workers (BMI or TKI). Among these are regulations related to investment models for workers.

Castle and Miller, based on Todaro's work (1986), describe that migration consists of several types: (1) permanent migration, where people move from one country to another without any intention to re-settle in the country of origin; (2) return migration, where people voluntarily return to their home country after living elsewhere or having lived less than one year in the other country; (3) forced migration resulting from displacement, usually as a result of events such as natural disasters, armed conflict, or other types of removal; and (4) irregular migration or migration done illegally (Castle and Miller, 2009).

The general objective of this research is to foster the ability of entrepreneurs in Indonesia through the implementation of project-based learning and to develop an investment model that uses the Early stage, Intermediate stage, Stage Advance, Expert (EIAE cycle), with the application of learning theory (Bandura, 2010). The EIAE cycle begins with the early stage, which often includes the challenge of learning how to begin a simple project or make money without startup funds, and ends with the expert stage, which includes bearing the risk for managing capital.

The specific plan objectives are as follows (Data TKI, n.d.). (1) Change the mindset of TKI located throughout in the world. An investment model can be developed by brainstorming strategies and providing direct learning experiences through partnerships (Beine, Lodigiani, & Vermeulen, 2012) between TKI and business communities supported by financial institutions. All parties can benefit reciprocally (Giles & Rea, 1970) (2) Develop investment models with financial institutions as a mandated pillar in the financial services authority in the blueprint of financial literacy for Indonesia. Through project-based learning (McLelland, 1971), understand the stages involved in opening a simple or complicated business, including the calculation of risks and preparation of business documents. (3)

Develop an authentic performance-based assessment system (Charitonenko & Afwan, 2010) to measure the success rate of BMI and TKI. (4) Identify any constraints to be investigated in future studies.

To create an appropriate model, this study explores the characteristics of a proper training approach for developing the economic potential of workers' remittances. A case study of Indonesian immigrant workers is presented as an example of how workers respond to and perceive policies and how this influences the effective training model in specific conditions.

2. Literature Review

2.1 The concept of adequate training

A training program for Indonesian migrant workers should provide beneficial activities and minimize adverse impacts. Workers should participate actively in the training and develop a competitive advantage. A large number of Indonesians work abroad (Table 1), and they can be leading actors in developing an appropriate training program for the social and economic utilization of remittances with the goal of achieving financial literacy.

Prominent actors, namely, communities, local governments, the private sector, and academia, have interests that affect the goals and strategies in developing an appropriate training program.

The essential elements of teaching design are the ultimate goal, learning activities, learners, assessment, and evaluation (Indarti, 2004). This is shown in Table 1. Workers would be able to undertake the investment process if only the existing financial institutions could improve. In the definition phase, developers determine the scope of activities, outcomes, schedule, and possibilities for presentation. Next, in the proposal phase, they identify needs, specify objectives, discuss the stakes, and create the final product, strategy, and product testing program.

Table 1 Number of Indonesian migrant workers by year (2010–2017)

Year	No. of migrant workers
2010	644,731
2011	632,172
2012	575,804
2013	586,802
2014	494,609
2015	512,168
2016	429,872
2017*	629,872
TOTAL	**4,506,030**

Source: National Statistics Bureau, Workers Placement Bureau, Author's calculations. *Data as of May 31, 2017. In total, over the period, Indonesia had over four million departures of migrant workers traveling abroad.

The design includes an outline plan with a draft document and assessment. In the demonstration phase, the goal is to develop the design specifications and establish the quality of facilities and product development for media. This results in a detailed document about the product (storyboards, templates, and media prototype modeling materials). The development phase serves and guides learners with results in the form of teaching materials in core activities in an effort to ensure that all designs can be used for the user and meet the objectives. Finally, in the presentation phase, the materials are delivered to clients, and recommendations are offered. The result of this phase is the success or failure of the draft conclusions of the products developed for the benefit of users and the teams involved. Borg, Gall, and Gall (2013) explained that "educational research and development is a process used to develop and validate educational production." The analysis provides measures of educational products in this case, the investment models, and assessments of their value.

2.2 Neoclassical theory: Financial institutions

Τable 2 Indonesian migrant labor remittances (in million USD)

Country	2012	2013	2014	2015	2016	2017
ASEAN	2,587.00	2,628.00	2,711.00	2,985.00	2,940.95	653.51
Asia Countries	1,189.00	1,276.00	1,473.00	1,576.00	1,615.50	508.07
Hong Kong	450.00	486.00	554.00	589.00	572.49	163.59
Taiwan	457.00	492.00	578.00	639.00	668.97	216.94
South Korea	91.00	94.00	123.00	150.00	178.24	67.28
Japan	152.00	160.00	175.00	157.00	153.55	48.65
Macau	36.00	42.00	40.00	35.00	35.93	9.79
Others	1.00	1.00	4.00	6.00	6.32	1.83
Australia and Oceania	3.00	3.00	7.00	14.00	46.52	16.23
Middle East	2,760.00	2,651.00	2,378.00	2,179.00	2,870.38	866.11
Africa	6.00	6.00	16.00	31.00	45.60	14.06
Europe	91.00	22.00	60.00	97.00	135.22	42.85
Indonesian workers' remittance	**6,735.00**	**6,736.00**	**7,018.00**	**7,415.00**	**8,345.07**	**9,342.35**

Source: Indonesian Central Bank, 2017

The neoclassical theory of migration focuses on economic resources and push and pull factors (Kristiansen, Furuholt, & Wahid, 2003). It emphasizes displacement from a densely populated area to a more tenuous one or from low-income areas to ones with fluctuating business cycles or high-income areas (Castle and Miller, 2009). The driving factors are the conditions in the country of origin, as negative situations motivate people to move in search of a better life. For example, push factors include natural disasters, political instability, economic downturns, demographic growth, low standard of living, and lack of democracy. In contrast, pull factors are the conditions in destination countries that are attractive, such as a need for labor, a better quality of life or living standard, and economic and political stability.

Based on this theory and amount of remittance, a person's decision to move is a rational decision made by calculating costs and benefits to obtain income maximization (Mead & Liedhom, 1998). Also, according to this theory, a person migrating also maximizes to individual utility, that is, attempts to maximize his or her potential to obtain what Chiswick (Mafruhah, Sarsito, & Gravitiani, 2012) referred to as human capital. The point is that people decide to invest through migration. They invest in education or vocational training (skills) and will migrate if the results (revenues) are expected to be higher than the effort expended to migrate. A financial institution can be a buffer actor (Palmer, 2013) with a variety of roles in instilling confidence for workers to use the remittance economy to create a sustainable investment. Banks and financial institutions are of great interest to Indonesian workers, who number nearly four million (Robinson, 1997). As the remittance sent to Indonesia reaches one million per month, the turnover of funds in financial institutions in Indonesia is quite significant (as shown in Table 2).

Indonesian workers' remittances present a great economic opportunity, with the potential to alleviate poverty through decisions to choose suitable investment materials or non-materials (Silvey, 2004). Strengthening investment is understood as a standard requirement of Indonesian workers for helping the family and community (Schiller & Crewson, 1997). Remittances can be a resource for empowering society (Supriana & Nasution, 2010) if they are utilized by improve skills such as soft skills. This research investigates workers' perception of the role of financial institutions using a participatory training model for Indonesian migrant workers. Primary data were collected through questionnaires and in-depth interviews (Delphi method) to the group of experts selected from among migrant workers, policy holders, academics, and bankers. In-depth interviews were conducted to obtain the perspective of various parties associated with the role of financial institutions. A training was developed to maximize the social benefits of remittances. The training design emphasized the financial institution's role as a disseminator and adapter of models (Borg et al., 2013; Cennamo & Kalc 2005).

2.3 Current situation of Indonesian migrant workers

The number of BMI and TKI fluctuates from year to year. The most massive increase, seen in 1997–1998, coincided with the economic crisis in Indonesia. Almost four million Indonesian migrant workers are spread across 142 countries, and this makes them a great potential resource for the utilization of remittances for social and economic purposes. Remittances are an important source of external income or foreign exchange for Indonesia and other developing countries that rely on migrant workers in specific sectors (Personal Remittances, received, n.d.). Moreover, increased financial literacy can help the efficient utilization of remittances.

Low salaries in Indonesia have pushed migrant workers to consider migrating to other countries that they think can provide a decent living. The strategic value of migrant workers abroad, as foreign exchange earners, is that they reduce unemployment and become ambassadors of Indonesia abroad. However, the government needs to manage the placement and protection of migrant workers abroad so that the program remains sustainable.

There was an increase in economic remittances from 2010 to 2014, namely, an increase of 30% percent financial potential that can be used by financial institutions to collaborate in the process of workers' "graduating." Migrant remittances are transferred using the retail payment infrastructure in both sending and receiving countries. The national retail payment infrastructure includes clearing and settlement systems in each country and cross-border mechanisms involving financial institutions for migrant workers around the world.

3. Methodology

From a population of 2,254,420 customers, a stratified random sample was drawn of 90,528 customers of one of Indonesia's major commercial retail banks. They were all aged 18 years or older (the oldest being 104). The bank was selected because one of the authors had a working relationship with it and thus had access to data.

Indonesia has four large commercial banks with similar products and customers. Most Indonesian people have a relationship with at least one of these four banks. The large size of the customer base of the bank in this study, its broad geographical coverage, and the bank's similarity of structure to other banks were important factors that were considered in developing economic and social remittances training. Based on the survey and questionnaire results, several factors determine the role of financial institutions in providing financial literacy in the form of training to migrant workers. "Graduates" of TKI indicated other factors affected workers' perceptions of the participatory training (PIK) (Macionis, 2010).

Table 3 Results of descriptive analysis

Variable	Description	Sample	Total Sample		Treatment Group		Control Group	
			Mean	SD[a]	Mean	SD[b]	Mean	SD[c]
Age		90.516	479	19.4	53.3	16.5	50.1	17.6
Gender	Male=1, Female=0	90.528	0.489	0.500	0.501	0.500	0.481	0.500
Urban	The largest 4 cities surrounding areas=1	90.516	0.791	0.407	0.805	0.396	0.795	0.403
Income	Annual	90.516	149.053	146.053	207.383	172.383	174.326	144.519
Wealth	Total Investment	90.516	233.562	715.127	538.383	1.216.397	219.479	453.494
Number of products[b]	Financial product	90.520	3.052	1.358	4.356	1.534	3.561	1.34
Fund flows[c]	Mutual funds	90.516	639	8450	1939	21.362	864	3199
Profitabillity	Income costs	90.516	2203	5554	5279	9360	3431	6136

Notes

a When surveys are used, interpretations of deviations should be made with caution.

b The products included were

c Mutual Fund IP

Based on the results of the preliminary questionnaire administered in the first phase of the research, the factors of each dimension are established as follows (Table 3).
1. Training establishment (BP)
2. Speakers (PEM)
3. Training topic (TEMA)
4. Methods (CARA)
5. Entrepreneurship value (WIRA)
6. Management aspect (MAN)
7. Financial planning arrangement (PERK)

The financial institution engages in seven of these dimensions of the factors affecting workers' perceptions of the training. Construct reliability (CR) and variance extracted (VE) were calculated with the following formulas.

CR Formula:

$$Construct\ reliabillity = \frac{(\sum standardized\ Loading)^2}{(\sum standardized\ Loading)^2 + (\sum measurement\ error)}\ (1)$$

VE Formula:
$$Variance\ extracted = \frac{\sum standardized\ Loading^2}{\sum standardized\ Loading^2 + \sum measurement\ error}\ (2)$$

A higher value means that the indicators for latent variables are reliable. The suggested value for reliability is greater than 0.7, and for extracted variance, greater than 0.5. The values of CR and VE were used in finding the following results.

4. Results and Discussion

4.1 Validity testing

The first stage consisted of validity reliability testing, which is carried out for each of the dimensions of the two variables (Dillon & Matthew, 1984). The results were as follows. In the validity of test results for 22 of the questions, the reliability of each dimension with PIK variables showed good results, where all dimensions had sufficient reliability. Two grains were invalid, and these were not included in subsequent analyses. Table 4 presents the findings.

Table 4 Factors of Indonesian workers' perceptions of the participatory training

No.	Variable	Coefficient Validity	Note	Coefficient Reliability	Note
1	BP01	.430	Valid		
2	BP02	.379	Valid	.573	Reliable
3	BP03	.200	Invalid		
4	BP04	.339	Valid		
5	PEM05	.423	Valid		
6	PEM06	.408	Valid	.600	Reliable
7	PEM07	.395	Valid		
8	TEMA08	.343	Valid		
9	TEMA09	.422	Valid	.535	Reliable
10	TEMA10	.284	Invalid		
11	CARA11	.569	Valid		
12	CARA12	.443	Valid	.706	Reliable
13	CARA13	.571	Valid		
14	WIRA14	.465	Valid	.625	Reliable
15	WIRA15	.499	Valid		

No.	Variable	Coefficient Validity	Note	Coefficient Reliability	Note
16	WIRA16	.348	Valid		
17	MAN17	.301	Valid		
18	MAN18	.377	Valid	.539	Reliable
19	MAN19	.378	Valid		
20	PERK20	.356	Valid		
21	PERK21	.430	Valid	.554	Reliable
22	PERK22	.325	Valid		

Source: Author, calculation 2017

As for the perception variables BMI, of the 10 variables analyzed, only one was invalid and was not included in subsequent analyses. Essential actors were considered in developing the economic and social remittances training.

To develop the training, three banks in Indonesia (BNI, Mandiri, and BRI) were chosen to participate. According to the Memorandum of Understanding between the financial services authority and the banks, these three banks are trying to create an inclusive financial system to address socioeconomic resources generated by workers' remittances. Migrant workers, as the objects of study, can explain their perceptions of various factors, including their views on the training benefits as well as their perceptions of financial institutions represented by banks and the financial service authority and Workers Placement Bureau as the policy holder. The results for the following two dimensions are summarized in Table 5.

    1. Perception of training benefits (MPEL)
    2. Perception of financial institutions (INSK)

Table 5 Workers' perceptions of the training benefits and financial institutions

No.	Variable	Coefficient Validity	Note	Coefficient Reliability	Note
23	MPEL23	.481	Valid		
24	MPEL24	.548	Valid		
25	MPEL25	.443	Valid	.723	Reliable
26	MPEL26	.404	Valid		
27	MPEL27	.430	Valid		
28	MPEL28	.442	Valid		
29	INSK29	.491	Valid		
30	INSK30	.337	Valid		
31	INSK31	.228	Invalid	.581	Reliable
32	INSK32	.351	Valid		

Source: Author data, calculation, 2017

4.2   Priority training by financial institutions

The strategy was developed using structure equation model (SEM) analysis to obtain a good model fit. Before the SEM analysis with the full model, CFA was carried out for both variables (Hair, Anderson, Tatham, & William, 2014). The results are shown in Figure 1.
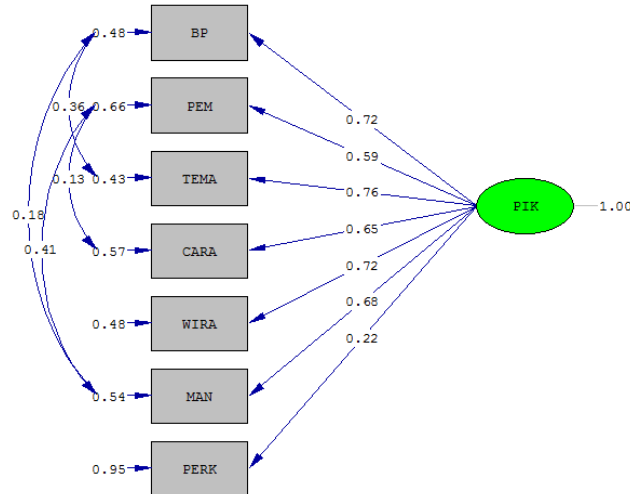
Figure 1. Perception and factors of the participatory training: CFA results.

The CFA results for PIK variables showed that among the seven indicators used in the analysis, there was one variable, PERK, whose value was below 0.5. This variable was dropped and not used in the analysis of the full model. Thus, the analysis of the full model included six indicators whose values were above 0.5.
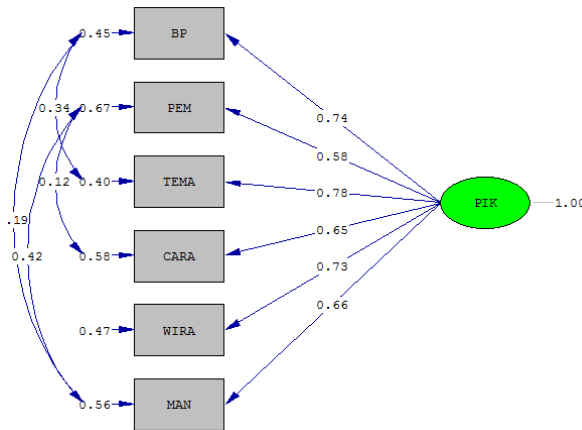

Figure 2. Perception and factors of the participatory training.

CFA was not carried out for the variable PBMI, as it had only two indicators, and three are needed for CFA (Figure 3).
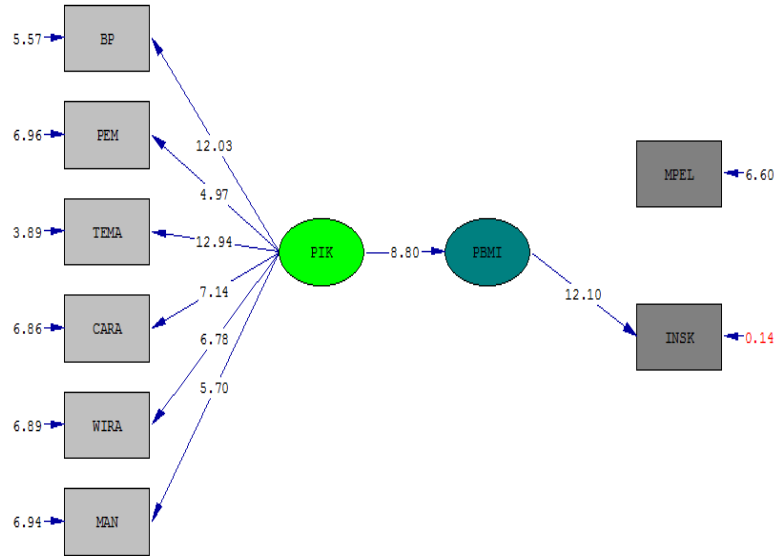
Figure 3. Perception and factors of participatory training.

A full analysis of the results of the model indicated that all line t-values higher than 1.96 were significant, as were the lines between PIK and PBMI. The value for great relationships formed was 95%, while the influence from PIK to PBMI amounted to 90.25%, as Figure 4 shows.
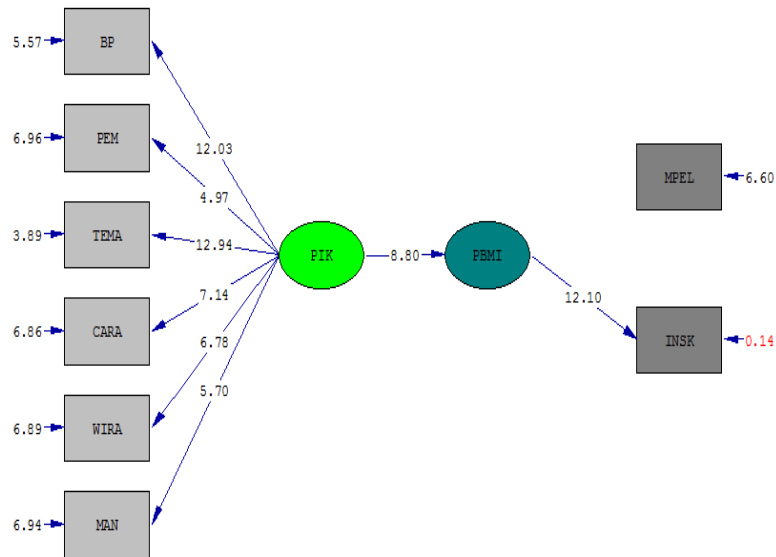

Figure 4. Full analysis of perceptions and factors of the participatory training.

Based on the results of the analysis, there was a significant influence from PIK to PBMI (90.25%). CFA showed that of the seven indicators firstly hypothesized to be the variable reflector PIK, only six had a shallow loading value equal to 0.22.

5.   Conclusions

Three main conclusions can be reached concerning how financial institutions can use participatory training as a means of maximizing the economic and social remittances of Indonesian migrant workers. Firstly, there are seven critical success factors: forms destination, development training, speakers, training themes, delivery mode, enterprise value, and aspect management. Then, how should financial planning be carried out? The actors who play an essential role are financial institutions, migrant workers, and stakeholders (FSA, BNP2TKI) as the policy holders.

Second, there are two viewpoints on the role of financial institutions and the training model that can maximize the economic and social remittances of Indonesian migrant workers. These are migrant workers' perceptions of financial institutions and the benefits of the training.

Lastly, based on the results of SEM, the primary factor was the implementation of financial inclusion socialization or financial literacy. The economic utilization of remittances from migrant workers is very important, and financial institutions realize this. Therefore, as a moral obligation, in addition to collecting funds, they provide trainings for migrant workers. The government represented by the OJK and BNP2TKI still plays a significant role in training migrant workers as well as giving provisions to migrant worker alumni.

Based on the research findings, we can offer some advice for financial institutions seeking to formulate priority training strategies for migrant workers to take advantage of economic and social resources generated by remittances. Migrant workers see financial institutions as suitable. The confusion surrounding starting a business should be addressed by financial institutions in cooperation with embassies, along with BNP2TKI and the OJK, as the frontline to make the training a business package that provides support for administrative and financial problems of micro-credit.

Moreover, the perception of financial institutions is somewhat negative, due to bureaucratic presumptions, and this is problematic. On the other hand, workers had positive perceptions of the training. Everyone who attended considered it helpful for improving their living standards upon returning to Indonesia.

Acknowledgments

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