Exploring the Dimensions of Financial Literacy of Overseas Filipino Workers (OFWs)

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Abstract

This paper aims to explore the dimensions of financial literacy (FL) among Overseas Filipino Workers (OFWs) in the United Arab Emirates (UAE). Utilizing a mixed-method research design, preliminary qualitative interviews with OFWs became the basis in the development of a 50-item scale responded by 250 OFWs to extract the FL facets through an approach called dimensionality reduction technique. Under this, exploratory factor analysis (EFA) was used and 46 items were found to successfully load across five dimensions after 15 rotations, labelled as Factor 1: proactive financial engagement, Factor 2: prudent financial management, Factor 3: strategic financial improvement, Factor 4: experiential financial competence, and Factor 5: breadwinner's financial dilemma. The five constructs were revealed to jointly explain 62.918% of the variance. With these findings, the study underscores the need to develop a specific tailored FL intervention to enhance OFWs' financial wellbeing in the UAE. This work yields policy and practical implications pertinent to policymakers, educational organizations, and financial institutions interested in promoting FL among migrant workers.

Keywords

financial literacy; Overseas Filipino Workers (OFWs); exploratory factor analysis; United Arab Emirates

INTRODUCTION

Financial wellbeing is one big concern for Overseas Filipino Workers (OFWs) in reaching stability and betterment for their future. However, few OFWs possess good financial literacy (FL) competence for prudent financial decisions. OFWs' financial preparedness and ability to manage finances while working abroad will depend significantly on FL. Klapper and Lusardi (2020) refer to the generally low levels of FL worldwide as a common challenge, which is relevant for OFWs. Even though they are expected to be the utmost and first-class beneficiaries of numerous programs related to financial inclusion, an urge to enhance FL is more common among these workers. Banta and Pratt (2021) also emphasize that one thing that needs to be changed is the narrative of OFWs' perceived financial irresponsibility and the need for a deeper probe into their struggles with money.

FL is an essential key to economic stability and development. The need for FL has become recognized as an essential life skill that is considered vital internationally. Walakambura (2020) reports that financial education registered an increase in saving and retirement planning activities among the educated on financial issues compared to the uneducated in developed and emerging countries. Even then, FL has been driven globally, but the Philippines is only at 116 in the Human Development Index of the UNDP 2021. The country received an FL score of 25 instead of the world average of 33 points. In this regard, it is essential to note that in the 2019 Financial Inclusion Survey by the Bangko Sentral ng Pilipinas (BSP), Filipino adults are better at inflation. However, a closer examination of the survey also reveals that a smaller portion of Filipinos know how to optimize savings through interest rates and understand the concept of compound interest.

In line with this, the BSP has acknowledged the contribution of FL to the Philippine economy and has taken steps in strengthening this by private sector entities such as banks. Programs that build FL among students, young professionals, OFWs, and other underprivileged sectors like farmers are now installed. FL is slowly emerging to focus on bestowing insights that can be acted upon in the name of better financial habits and sound decisions eventually felt at the level of consumer well-being. Xiao (2020) identifies FL education as the existence and promotion of critical financial behaviors that the populations undertake, pointing toward a more targeted and practical approach to raising FL rates and increasing financial inclusion in the Philippines.

Much of this burgeoning literature is based on what today would be considered state-of-the-art experimental methodologies in explaining motivators of FL and the economic advancement fostered by financial education. For instance, Bustamante, Castillo, and

Bagwasan (2020) studied the level of FL among young professionals at Bonifacio Global City in Taguig, Philippines; the specific competencies described were in personal financial management, risk management and educational planning using a descriptive survey method. The same Bustamante et al. study of 2020 established that financial and risk management combined got an 'Effective' rating while educational planning got a 'Somewhat Effective.' This time, another study related to the FL of OFWs was undertaken in Thailand, measuring the prevailing levels of FL among OFWs to understand how they managed their finances and identifying common financial problems OFWs faced through primary data collection (Amparo, 2022). Findings were that OFWs had low levels of FL and were not keen to invest. Furthermore, it was also found that OFWs need to be financially literate and have an investment attitude. Managing income and financial discipline is difficult for them, including the families they left in the Philippines. These results indicate how concrete initiatives in financial education are needed to significantly increase the FL and management skills among OFWs. Such empowerment programs enable one to make better financial decisions and improve economic well-being.

Financial Literacy (FL). Scholarly research on FL, particularly its measurement, analysis, and application, has been carried out extensively over the past few years. The operational definition of financial literacy as the ability to make sound decisions on matters of finance, including savings, investments, and debts, has been widely accepted in terms of its association with beneficial financial behaviors—like prudent saving practices, preparations for retirement, and making reasonable investment decisions (Kumari, 2020; Kadoya & Khan, 2020). Studies such as Hauff, Carlander, Gärling, and Nicolini (2020) and Mpaata, Koskei, and Saina (2020) have found evidence of the positive relationship FL has with behaviors like saving and investment and, indeed, does play a part in enhancing financial well-being.

Nonetheless, the correlation between financial literacy and financial behavior is intricate. Studies conducted by Strömbäck, Skagerlund, Västfjäll, and Tinghög (2020) and Baker, Kumar, Goyal, and Gaur (2019) have highlighted that elevated levels of FL may not always lead to optimal financial decision-making. This is because, among other things, behavioral biases influence financial decisions. Hence, there is a need to increase FL and reduce the cognitive and psychological factors influencing financial decisions. FL has been quantified through a framework that tests knowledge, behavior, and attitudes related to a comprehensive approach toward understanding FL by Atkinson and Messy, 2012. In other research, for example, Harahap, Thoyib, Sumiati, and Djazuli (2022), partial least squares structural equation modeling has been used in measuring FL's influence on financial planning and retirement preparations as part of its impact on long-term financial planning.

Financial Literacy of Overseas Filipino Workers. A few studies on the FL of OFWs highlight the need for greater awareness among this group. Some studies document that low levels of FL among OFWs may lead to low savings rates and high debt levels, resulting in unfavorable economic outcomes. According to a study by Amparo (2022), FL significantly explains OFWs' savings behavior, while research by Lacsina and Opiniano (2017, cited in Opiniano, 2020) proved a negative relationship between low FL and increased financial stress among OFWs. Another study by Jang, Choi, Lee, and Go (2019) found that FL is positively related to active, long-term financial planning, including retirement planning, which is essential for financial stability. However, this study also highlighted limited financial education and knowledge access barriers.

Similarly, Kim et al. (2022) show that language proficiency positively affects FL, as it helps OFWs better understand financial information in host countries. Evidence suggests that FL is closely tied to the economic well-being of OFWs. Therefore, efforts should be made to improve their FL and empower OFWs to make informed financial decisions for a secure future through targeted educational and financial awareness programs.

Background of Overseas Filipino Workers in the United Arab Emirates. An estimated 648,929 Filipinos are in the UAE as of January 2020. These Filipinos include residents as well as undocumented/illegal migrants. Many have historically worked in low-skilled occupations such as home service workers, caretakers, and assembly workers. Filipinos have long been stereotyped as "low-skilled immigrants." This stereotype, however, has altered throughout time. Filipinos are now perceived differently, with both conventional and social media acknowledging the rising number of highly qualified Filipino professionals in the Emirates and their significant contributions to the region's economy.

According to a 2019 survey by EON Group, a communications consultancy firm in Dubai, the Filipino workforce in the UAE is no longer concentrated by low-skilled immigrants. Highly trained Filipinos are now represented in all sectors. According to the data, OFWs are classified into the following sectors: engineering, architecture, and construction (16.6%), hospitality and tourism (15.6%), customer services (13.3%), health and medical services (10.4%), marketing and advertising services (7.8%), manufacturing and production (5.9%), and domestic household services (5.6%). Thus, according to these statistics, many Filipino workers now render semi-skilled and highly-skilled labor, moving away from low-skilled occupational groups. Among the respondents, 64% are college graduates, with 6.7% holding postgraduate degrees. About 22.6% are college undergraduates, while only 6.7% are high school graduates. Regarding employment levels, 19.6% work in mid-senior management, 27% are at the associate or supervisory level, and 31% are at the entry level. Additionally, 5% of respondents

are in executive or director positions, while 4% are business owners or sole proprietors.

There is limited in-depth research on OFWs' FL; this subsequently leaves a significant gap in the available research on how OFWs, particularly those based in the Middle East, manage their FL. The first knowledge gap highlights the sparse use of exploratory factor analysis (EFA) in FL studies among migrant workers, specifically OFWs, thus limiting EFA dimensions linked to the discussed knowledge gap. Based on these gaps in the literature, the present study aims to contribute to an understanding of OFWs in a specific context: those working within the Middle East. Despite the global issue of financial illiteracy highlighted by scholars like Klapper and Lusardi (2020) and calls from Loyola and De Los Santos (2020), along with Banta and Pratt, for more targeted initiatives, there is still an absence of research that addresses the unique socioeconomic environment of the UAE. As one of the largest hubs, a melting pot for migrant employment, particularly for OFWs, the Middle East presents unique challenges that require deeper investigation into FL and personal financial management. The research seeks to fill this void by investigating distinct factors influencing the FL of OFWs in the UAE, not only attempting to bridge the existing gaps but also aiming to lay the groundwork for policy directives toward customized programs that could enhance resilience and socio-sustainable welfare across a wider spectrum of the OFW community.

Research Objective

The primary objective of this study is to establish a comprehensive framework for investigating the FL of OFWs in the UAE. Specifically, the study seeks to accomplish two main objectives: to identify and define the factor structures underlying the FL of OFWs in the UAE, thereby unraveling the complex components that constitute FL in this unique context, and it aims to construct a multidimensional framework that encapsulates these identified factors, offering a detailed and contextualized understanding of FL as it pertains to OFWs.

METHODS

Research Design

This study provided a detailed account of the research on the FL of OFWs in the UAE. The analysis method adopted engaged a qualitative and quantitative structure that offered a rich understanding of this particular population category's FL. This saved much time in deconstructing the complexities of FL among OFWs and identifying the factors that define these workers' financial knowledge, perception, management, and problem-solving capabilities. The first process included a qualitative data analysis of the study, which is

imperative in identifying the current standings of OFWs' FL in the UAE. The analysis began, and data were collected through in-depth interviews with the help of a semi-structured written interview guide that allowed for broad discussions on personal finances. To ensure that the data is credible, the researcher ensured that these interviews were conducted, recorded, transcribed, and analyzed following strict protocols known as interview data cleaning. Researchers using this method have ensured they coded and used thematic analysis in analyzing the data, a widely recognized approach to ascertaining patterns and themes in any given dataset (Braun & Clarke, 2021). The qualitative survey produced a 50-item statement for the quantitative survey.

The study's second phase used a quantitative, non-experimental research design that used exploratory factor analysis (EFA) as a methodology to deconstruct and analyze the FL of OFWs in the UAE. According to Salkind (2010, as cited in Valle, 2022), the non-experimental research design was used where the researcher intended to investigate the relationships with existing groups or describe the characteristics of a group without altering the variables. EFA was selected since it effectively simplifies multivariate data into useful information to serve this study well (Hair, Black, Babin, & Anderson, 2013; Dewi, Febrian, Effendi, Anwar, & Nidar, 2020). In EFA, the researcher classified the variables identified in their natural environment, meaning that the method efficiently summarized and interpreted the dataset. In addition, the works of Stapleton (1997), as well as Goretzko and Bühner (2022), conducted a study to explain the importance of factor analysis to determine the number and kind of variables in the large dataset and how it helps the researchers to identify the coherent tests or constructs. Consequently, this study employed EFA in analyzing and categorizing the variables that constituted the concept of FL in the context of OFWs and acquired ampler structures for further analysis and comprehension.

Population and Sample

This research centered on OFWs in the UAE, employing a mixed-methods approach delineating two distinct respondent groups. This distinction of epistemology is as follows: qualitative and quantitative. During the study's first phase, the qualitative segment, three OFWs were purposively interviewed to gain a rich, descriptive, and detailed account of the nature of FL among the OFWs. These interviews were essential in laying bare the multiple and nuanced biographical accounts of the FL of OFWs. After that, the quantitative segment aimed to involve a larger sample of 250 OFWs for the survey because the study identified that as the adequate sample size according to the standards by Pearson (2008, as cited in Abdullah, Zainudin, Ismail, Nawai & Zia-ul-haq, 2022) who reported that the minimum and maximum

number of samples required for EFA is 50 and 384 respectively. This methodological decision of engaging the researcher, an OFW in the UAE, was designed to provide a more holistic understanding of the level of FL with the help of the detailed questionnaires used in the focus group interviews and broader tendencies outlined in the web-based quantitative survey. OFWs were chosen as study participants in the UAE based on literature that pointed to differential FL opportunities and pitfalls particular to migrant workers (Kim et al., 2022).

Therefore, this study needed to set inclusion, exclusion, and withdrawal criteria to identify the correct participants, such as the OFWs living in the UAE. The inclusion criteria stated relevant criteria like employment status, the time frame that the participants have been an OFW, and residency in the UAE to ensure that all participants concerned were relevant to the study's objective. Thus, the exclusion criteria were to exclude participants unsuitable to the study criteria, for instance, OFWs physically residing outside the UAE or those who do not possess specific demographic attributes needed to answer the research questions effectively. Withdrawal criteria described circumstances under which any participant could withdraw from the study on his or her voluntary interest or due to changes in the inclusion/exclusion criteria or any discomfort that he or she might develop.

The factors that led to the selection of UAE as the target study location are the large population of OFWs in UAE, available job vacancies for OFWs, and the peculiarities of the UAE financial system that make it difficult for OFWs to manage their money. Moreover, the strong and stable economy of the UAE, as well as the amount remitted by the OFWs, was the rationale for choosing the country in the target study area. The decision to focus on the UAE proved to enable the analysis of OFWs' financial management practices and FL in a particular context, thus increasing the relevance and effectiveness of the research.

Among the Middle Eastern countries, the UAE, located in the Arabian Gulf, is recognized for its potential in all investment fields at the center of the Gulf States, the Indian subcontinent, the Commonwealth of Independent States, CIS, and parts of Africa. This sector is also central to being a nursing ground for new ideas and initiatives.

Instruments

The research conducted in this study about the FL of OFWs in the UAE used an elaborate multi-phased tool that included qualitative and quantitative techniques to capture all the aspects of FL. The qualitative aspect of the study started with interviews with three OFWs, which were chosen purposefully. The qualitative data collection tool used in this research study is an 11-item, structured, and standardized open-ended interview questionnaire developed to capture the FL of OFWs in the UAE. An interview guide developed

with much care for this phase focused on open-ended questions to elicit a complex understanding of the participants' FL knowledge, perception, practice, and experience. This qualitative segment was instrumental in gathering a large amount of narrative data, which formed the basis for the subsequent quantitative part.

Five experts evaluated the qualitative written interview questionnaire and its effectiveness and coverage. Validators were asked to rate the questionnaire regarding ethics, artistry, and rigor across several aspects. The ethics section, including the introduction of purpose, explanation of confidentiality, duration, informed consent, and closing aspects, was approved by all the validators as there was apparent compliance with ethical standards. The validators judged the questionnaire's artistry, script, and appropriateness for storytelling and narratives: four gave a rating of 10, and one – nine, which means "very good." Concerning the degree of difficulty, questions were asked to elicit elaborate affirmative and sequentially sound responses. Most aspects of rigor were also rated relatively high, with a slight difference noted in the provision of the probe questions and clarity of questions, with an average of 9.4. Generally, the qualitative interview questionnaire was considered "very good," with few recommendations.

The quantitative research phase of the study extended the investigation by distributing a structured survey questionnaire to another 250 OFWs. The first part of the instrument used in the study involved collecting demographic data, which helped the researcher have efficient background information on the respondents. The second part of the quantitative research instrument used in this study is a 50 statements closed-ended structured Likert scale, a standardized test of respondents' FL. This approach enabled the quantification of the level of FL among the OFWs using a Likert scale ranging from " not essential/important" to "highly essential/important" to determine the level of importance of OFWs according to various aspects of FL.

Five validators, who are experts in the field of quantitative survey questionnaires, rated the instrument based on different criteria. The clarity of directions and items was rated an average of 4.4, which means that the directions and items were assessed as "very good" overall. In assessing the presentation and organization of items, the average score was five or "excellent." The suitability of items received a mean of 4.4, which deemed the items "very good" and suitable for the study. The adequacy of items per category or indicator was also considered adequate, and the score was "very good" with an average of 4. 4. The attainment of purpose was rated at 4.2. The aspect of objectivity also received a "very good" rating with a score of 4.4, which means that all the items were regarded as non-biased. Lastly, the scale and the evaluation rating scale got an average of 4.6, which is considered "excellent." Overall, the

expert validators scored it as "very good," thus affirming its reliability and applicability to the research.

In this way, the current study made a comprehensive assessment of FL among OFWs in the UAE using the mixed-methods approach. This flexibility is the key advantage of the combined approach of using both qualitative and quantitative research tools, as it allowed the research to collect not only the first-person narratives of the respondents but also the overall statistical trends of the population's FL. This methodological design, by the works of Goyal, Kumar, and Xiao (2021), stressed the necessity to employ various approaches to investigate multifaceted realities, including the FL of migrant workers.

Data Collection

While developing this research, the authors paid close attention to the following critical processes to make the research successful. Firstly, a team of internal and external expert validators scrutinized the research instruments to ensure accuracy and appropriateness. After validating the study, the researcher reviewed the required procedures set by the University of the Mindanao Ethics Review Committee (UMERC) and accomplished the approval certificate UMERC-2023-445.

Subsequently, an endorsement letter was written to the Dean of the Professional Schools with the Research Adviser's notation as an official letter addressed to the Labor Attaché of the Migrant Workers Office in Dubai and Northern Emirates for permission to conduct the study within the jurisdiction. After obtaining the necessary authorization, the questionnaires were administered among the target respondents – OFWs in the UAE through face-to-face and online transmission in the shortest time possible. The data collected from the respondents were in Google Forms; this was a rigorous screening process that selected only those correctly filled out. The validated responses were then forwarded to the school's statistician for the statistical analysis of the results. The following sections of the study presented the findings and the interpretation of FL among the OFWs in the UAE.

Statistical Tools

Several statistical tools were carefully used while testing the data gathered in this study of the FL of OFWs in the UAE. First, the Kaiser Meyer-Olkin (KMO) test was used to determine sampling adequacy, and Bartlett's test of sphericity was used to test suitability for factor analysis. Such tests were essential for endorsing the data for additional analyses to conduct factor analysis on appropriate foundations (Gonick, 1993; Musasa & Tlapana, 2023). After this, principal component analysis (PCA) was conducted since data reduction was used to identify

the apex factor structures that define FL among the OFWs.

The decision on which factors to retain for rotation was finally made with a varimax with the Kaiser normalization method as the factor rotation method. This method helped decompose the factors and highlighted their relations since the factor model was rotated to maximize interpretability (Ricolfi & Testa, 2021). Finally, thematic analysis of the extracted constructs was done in order to come up with general themes in the data, as Braun and Clarke (2006, as cited in Björklund, 2019) pointed out that this procedure is quite helpful in determining patterns or themes that are coming from the data after analyzing the dimensions on the FL of OFWs in the UAE.

RESULTS AND DISCUSSION

Demographic Profile of OFWs in the UAE

Table 1 reveals the demographic profile of 250 OFWs surveyed in the UAE. This composition provides insights into the nature of the OFW community within the UAE and has implications for their economic contributions and social dynamics. The demographic analysis of OFWs showed that this population is young, educated, and predominantly employed. This demographic profile not only paints the current picture of the socioeconomic realities of the OFW community in the UAE but also holds significant implications for designing and delivering specific financial education interventions, social services, and future policies conducive to employing OFWs.

Measure of Sampling Adequacy and Sphericity

Table 2 shows the KMO's Measure of Sampling Adequacy and Bartlett's Test of Sphericity, which reveal the following outcome. In the case of KMO, the statistics determine the appropriateness of the sample size for performing the factor analysis (Cerny & Kaiser, 1977). It assesses the suitability of factor analysis by looking at the off-diagonal elements that measure the extent of multicollinearity of the variables through the determinant score. Kaiser (1974) added that KMO values are classified as follows: values above 0.90 indicate "marvelous" adequacy, values in the 0.80s are considered "meritorious" adequacy, in the 0.70s "middling" adequacy, in the 0.60s "mediocre" adequacy, in the 0.50s "miserable" adequacy. Values below 0.5 are deemed "unacceptable." This study obtained a KMO value of 0.953; the sample size can be approved to be marvelous in that it fulfills the demand of adequateness level to a reasonable extent, not to mention that correlation among different variables has been very high. This result supports the appropriateness of factor analysis as the most effective approach to analyzing the above dataset. It also shows that a solid partial correlation

Table 1. Demog	raphic Profile o	of OFWs in the UAE
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Demographic Characteristics	f	%
Age		
18-24	7	2.80%
25-34	154	61.60%
35-44	70	28.00%
45-54	19	7.60%
Sex		
Male	111	44.40%
Female	135	54.00%
Prefer not to say	4	1.60%
Marital Status		
Single	124	49.60%
Married	122	48.80%
Other	4	1.60%
Educational Background		
Highschool or below	21	8.40%
College level	55	22.00%
Vocational	20	8.00%
Bachelor's degree	139	55.60%
Master's degree or higher	15	6.00%
Number of Years as OFW		
1-5	108	43.20%
6-10	113	45.20%
11-15	21	8.40%
16-20	7	2.80%
21 and above	1	0.40%
Emirate		
Abu Dhabi	75	30.00%
Ajman	10	4.00%
Dubai	137	54.8&
Fujairah	6	2.40%
Ras Al Khaimah	6	2.40%
Sharjah	12	4.80%
Um Al-Quwain	4	1.60%

overlaps a considerable degree of information among the variables. Therefore, factor analysis is needed to identify the forms of FL among the OFWs in the UAE.

Similarly, as Effendi (2019) pointed out, Bartlett's test of sphericity is utilized to test the significance of the correlations of all variables in the study instrument. This test examines the ability to merge certain factors into fewer, more relevant ones by comparing the identity matrix with the correlation matrix. They have a degree of freedom value of 10195.85, from which they enjoy a high level of freedom and a resulting p-value of 0.000; the test conclusively shows that the dataset has multivariate characteristics. This deviation from the

identity matrix shows that the use of factor analysis to arrive at the variables more influential in explaining the level of FL amongst the OFWs in the UAE is apt. They analyzed the data, and the critical p-value of 0.000 has evidence strongly supporting the rejection of the null hypothesis, as demonstrated by the significant correlations in table 2.

Table 2. Measure of Sampling Adequacy and Sphericity

Measurement		Value
Kaiser-Meyer-Olkin Measure of Sampl	0.953	
Bartlett's Test of Sphericity	Approx. Chi-Square	10195.85
	df	1225
	Sig.	< 0.001

Extracted Dimensions of Financial Literacy of OFWs

Table 3 displays the extracted and retained factors after applying techniques to explore the FL dimensions of OFWs in the UAE. The criteria on retention for an item involved factor loadings exceeding ≥0.50 are deemed qualified. On the other hand, factor loadings with 0.50 and below were excluded. The retained underlying constructs were then subjected to thematic analysis. Thematic analysis is best utilized when the researcher looks for patterns, or in this case, to categorize the theme of each dimension in the FL of OFWs, a methodological approach recommended by Braun and Clarke (2021) for its efficacy in pattern identification.

Based on extracted factors, five latent constructs were identified. Factor 1 was labeled *proactive financial engagement* (17 items, accounting for 47.74% of the total variance). The proactive financial management dimension embodies an individual's active approach to financial education and planning, particularly retirement. The obtained values of factor loadings are high – Q47 (0.773) for seeking advice from financial experts and Q31 (0.766) for engaging with financial advisors show recognition of the fact that retirement planning is a rather tricky process and valuable to get some professional consultation, thus in line with the findings made by Niu, Zhou, and Gan (2020), concerning the role of FL regarding retirement planning. Networking with fellow OFWs to make financial improvements Q32 (0.756) and attending FL seminars and workshops Q27 (0.742) convey the importance of being updated. The sub-dimensions that involve the computation of savings targets—frequently Q46 (0.69) and the presence of a clear retirement plan Q45 (0.659)—conform with Peiris' (2021) findings and returns on retirement savings and FL. Risk diversification in portfolios for future security Q39 (0.621) and usage of online tools and sources for efficient financial management Q35

Table 3. Extracted Factors of Financial Literacy of Overseas Filipino Workers

Item	Extracted Dimensions	Loading
	1 – Proactive Financial Engagement	Louding
47	I actively seek advice from financial experts for retirement planning. I engage with expert financial advisors because they are crucial to my	0.773
31	continuous financial education.	0.766
32	I improve my financial know-how by networking with fellow OFWs.	0.756
27	I utilize diverse resources like seminars and workshops to enhance my financial education.	0.742
46	I regularly calculate the savings required to meet my retirement goals.	0.69
45	I have a well-defined retirement plan.	0.659
39	I invest in diverse investment portfolios for future financial security.	0.621
35	I utilize online resources, which are my tools for effective financial management.	0.62
28	I actively access various financial tools, like online banking services, which significantly contribute to my financial knowledge.	0.555
29	I believe in consistently improving my financial education, actively pursuing it through diverse mediums.	0.554
30	I continually seek out resources and information tailored to the financial needs of OFWs.	0.527
48	I am confident about achieving my desired lifestyle upon retirement.	0.485
22	I regularly assess my finances for better financial well-being.	0.471
33	I have a good understanding of financial concepts such as budgeting, saving, and investing.	0.469
38	I experienced a significant impact on my financial knowledge through access to financial education.	0.467
50	I believe in exploring different retirement options to maximize my financial security.	0.459
21	I focus on building financial reserves.	0.437
Factor	2 – Prudent Financial Management	
8	I regularly save a portion of my income for future goals.	0.728
9	I maintain an emergency fund to cover unexpected costs.	0.644
7	I live below my means by following a budget.	0.639
11	I avoid taking unnecessary loans to maintain a healthy financial status.	0.616
23	I prioritize budgeting as crucial for managing my finances effectively.	0.558
25	I manage my finances effectively to steer clear of unnecessary debts.	0.558
2	I am confident in managing my finances as an OFW.	0.55
12	I regularly tailor my budget to align with my financial goals.	0.537

	I closely monitor my finances to identify areas where I can save more	
24	effectively.	0.491
26	I manage my finances effectively despite the challenges I faced as an OFW.	0.477
Factor 3	B – Strategic Financial Improvement	
5	I consider income diversification an essential strategy for achieving my financial objectives.	0.713
47	I actively seek out knowledge to continuously enhance my financial literacy.	0.696
4	I believe that personal motivation plays a significant role in improving financial literacy.	0.646
3	I believe in setting realistic financial goals to ensure better financial management.	0.624
13	I regularly check currency rates to maximize the value of my money when sending my remittance.	0.539
6	I believe that financial preparation is crucial for effective future planning.	0.531
15	I believe long-term planning is essential due to the unpredictability of working abroad.	0.524
16	I have gained wisdom from experience in spending wisely due to past challenges.	0.479
Factor 4	1 – Experiential Financial Competence	
36	I gained financial insights through real-world experiences.	0.766
37	I learned a lot about finances through trial-and-error approaches.	0.691
34	I can effectively manage foreign currency transactions.	0.583
42	I keep myself informed about the best remittance options available. I consider potential risks carefully before investing in any financial	0.577
41	instrument.	0.524
40	I plan to allocate some of my income as my financial reserves for future endeavors.	0.454
44	I aim for a balanced approach between short-term goals and long-term objectives.	0.409
Factor 5	5 - Breadwinner's Financial Dilemma	
20	I understand the responsibilities and challenges of being the principal breadwinner.	0.701
18	I encounter significant challenges as the principal breadwinner in managing finances.	0.692
19	I struggle with balancing support for loved ones while securing my finances.	0.642
14	I find managing financial uncertainties, such as exchange rate fluctuations, challenging.	0.522

improve the level of FL, characterized in Klapper and Lusardi (2020). There is a constant endeavor to seek out and gain more knowledge Q29 (0.554) about money. The deliberate seeking of appropriate tools for accessing money-related information for the OFWs Q30 (0.527) paints a picture of migrants' FL being deliberate and strategic in a manner that is acknowledged by Kim et al. (2022).

Factor 2 was labeled *prudent financial management* (10 items, accounting for 5.92% of the total variance). The prudent financial management factor encompasses a set of behaviors and attitudes geared toward the responsible handling and allocation of personal finances. The items with high factor loadings reflect practices such as regular savings Q8 (0.728), maintaining an emergency fund Q9 (0.644), adhering to a budget to live below one's means Q7 (0.639), and avoiding unnecessary loans Q11 (0.616), all of which are hallmarks of prudent financial behavior. Such practices are underpinned by research, which reveals that they may significantly enhance financial strength and help attain financial objectives in the future (Tyson, 2023). Budgeting Q23 (0.558) and strategies to avoid going into debt Q25 (0.558) are also consistent with understanding these as key processes that underlie achieving financial protection, which is particularly pertinent for migrant workers experiencing fluctuating income as the OFWs. Belief in being able to handle finances Q2 (0.55) effectively and: Habitually revising financial plans in order to meet one's financial objectives: Q12 (0.537) Proactivity of financial planning is, therefore, an essential aspect of financial sustainability as pointed out by Jang et al. (2019). Lastly, assessing personal financial situations Q24 with 0. 491 and managing finances may involve difficulties Q26 with a value of 0.477 reflects individuals' ability to manage their financial lives. This aspect is especially true in the case of OFs because they may have different financial problems because of their working condition (Atos et al., 2022).

Factor 3 was labeled *strategic financial improvement* (eight items, accounting for 3.68% of the total variance). The strategic financial improvement factor reflects a proactive and calculated approach to personal financial management and literacy, emphasizing the importance of continuous learning and adaptation to achieve financial objectives. Items with higher factor loadings, such as income diversification Q5 (0.713) and actively seeking knowledge for FL Q47 (0.696), suggest a strategic approach to financial growth and stability, resonating with the findings of (Kim et al., 2022). who emphasizes the importance of diverse income sources and continual education for financial success. Personal motivation Q4 (0.646) also has a positive effect on FL in line with the Goal Setting Theory, stating that intrinsic motivation is the key motivator used in the change management process towards educating people on gaining improved skills of FL. The realistic financial goals set in Q3 (0.624) and the

frequency of checking currency rate for remittance Q13 (0.539) also reveal a strategic and concerted approach of financial management as discussed in the goal setting theory, which states that specificity leads to better performance (Locke and Latham, 2012).

Additionally, the recognition of the need for financial arrangements, Q6 (0.531) and planning for future endeavors, Q15 (0.524), in light of the volatility working away, may be attributed to rational planning and planning ahead as a result of increased uncertainty, which is in line with the precautionary savings theory (Baiardi, Magnani, & Menegatti, 2020). Finally, the importance attributed to the lessons learned from previous financial difficulties Q16 (0.479) also implies that learning occurs in financial behavior. According to Hastings and Mitchell (2020), prior financial experiences can be pretty deterministic of future financial experiences.

Factor 4 was labeled experiential financial competence (seven items, accounting for 3.1% of the total variance). The Experiential Financial Competence relates to the knowledge and know-how acquired based on actual interaction with financial processes. This factor is defined as learning from experience Q36 (0. 766) and gaining more money knowledge through trial-and-error methods Q37 (0. 691), which previous studies pointed out that people have a better way of understanding and memorize something, especially lessons that involve money when they experienced it themselves (LeBaron, Runyan, Jorgensen, Marks, Li & Hill, 2019). The competence to perform foreign currency transactions Q34 (0.583) and knowledge about better methods of transferring money Q42 (0.577) show the learners' ability to deal with finances across borders, which is timely considering the rise in the importance of FL with enhanced globalization. As with the assessment of financial risks before putting into investment, consideration of risks before investing Q41 (0.524), the findings reiterate that risk assessment is central to effective and efficient financial planning. Understanding the need to set aside money for future contingencies Q40 (0.454) with an emphasis on trying to meet both the urgent needs as well as the distant ones Q44 (0.409) are indicative of strategic financial thinking and is supported by a study that identified the importance of achieving a balance between the present and the future prosperity of an economy (Rai, Dua, & Yadav, 2019).

Factor 5 was labeled *breadwinner's financial dilemma* (four items, accounting for 2.47% of the total variance). The Breadwinner's Financial Dilemma factor denotes the relationship between the assigned obligation of earning money and the difficulties that come with it. This process involves understanding and operating in the dynamics of financial operations while simultaneously having the burden of providing for dependents. Acknowledging the importance of breadwinning responsibility, Hettige, Ekanayake,

Jayasundere, Rathnayake, and Figurado (2012) and Taruc (2019) focused on the psychological and economic burden of breadwinning in the investigated context, more specifically, people who understand the importance of their breadwinner status Q20 (0.701) and experience numerous challenges to efficient financial management Q18 (0.692). Another feature is the conflict between the material help of relatives and one's own financial security Q19 (0.642). Another subdimension is the dilemma of caring for the immediate family's needs and providing financial security for the future (Sussman & Alter, 2012; Amparo, 2022). Additionally, the experience of other challenges with external and financial components, such as fluctuations in the exchange rate Q14 (0.522), reveals that breadwinners had to deal with the problems arising from globalization.

Latent Roots Criterion of the Extracted Factors

The information in Table 4 illustrates the latent root criterion, indicating that after 15 iterations, five (5) distinct dimensions that characterize the FL of OFWs in the UAE have been extracted from the dataset through factor analysis. These are determined factor structures: (1) Proactive Financial Engagement, with an initialized eigenvalue of 23.87 and explained variance of 47.739%; (2) Prudent Financial Management, with an initialized eigenvalue of 2.958 and explained variance of 5.917%; (3) Strategic Financial Improvement, with an initialized eigenvalue of 1.839 and explained variance of 3.678% (4) Experiential Financial Competence, with an initialized eigenvalue of 1.549 and explained variance of 3.097%; (5) Breadwinner's Financial Dilemma, with an initialized eigenvalue of 1.243 and explained variance of 2.486%.

Table 4. Latent Roots Criterion of the Extracted Factors

Factor	Initial Eigenvalues	% of Variance	Cumulative Variance
proactive financial engagement	23.87	47.739	47.739
prudent financial management	2.958	5.917	53.656
strategic financial improvement	1.839	3.678	57.334
experiential financial competence	1.549	3.097	60.432
breadwinner's financial dilemma	1.243	2.486	62.918

The latent root criterion is elementary to EFA as it is used to present the explained variances as well as the effectiveness of the analysis. This is done by calculating eigenvalues for each respective factor, which are measures of the variance that belongs to the particular factor that defines its importance in the data set. These eigenvalues and their accumulation of variance make up the given model's total variance. This cumulative variance is essential for

evaluating how this variance is translated into the identified factors required to determine the degree to which the dataset's underlying structure is identified.

Multidimensional Framework on Financial Literacy of OFWs in the UAE

Figure 1 presents a thematic framework that encapsulates the five dimensions defining the FL of OFWs in the UAE: proactive financial engagement, prudent financial management, strategic financial improvement, experiential financial competence, and breadwinner's financial dilemma. The researcher carefully assessed these factor structures using thematic analysis to identify the precise constructs that define the grouped domains of FL among OFWs. The analysis above demonstrates how each dimension equally impacts the levels of FL, hence acknowledging the comprehensive effect of these measures on OFW's financial behaviors and financial decisions while in UAE.

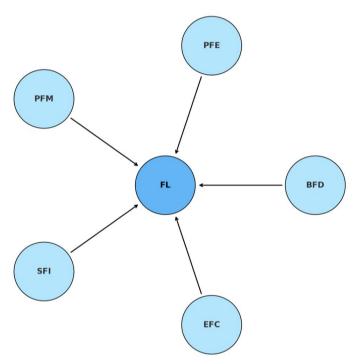


Figure 1. Final five-factor structure of financial literacy of OFWs

The five extracted constructs from the study on the FL of OFWs in the UAE are operationally defined as follows:

 Proactive Financial Engagement (PFE) is an individual's active pursuit of financial knowledge and planning, especially for retirement, characterized by consulting financial experts and leveraging educational resources.

- 2. **Prudent Financial Management (PFM)** advocates a cautious financial strategy, promoting saving, a balanced budget, and responsible credit use.
- 3. **Strategic Financial Improvement (SFI)** suggests the purposeful and voluntary efforts made to improve financial well-being and the processes involved, which include income generation and realistic goal setting.
- 4. **Experiential Financial Competence (EFC)** entails gaining financial skills through actual experience, including the ability to conduct foreign exchange transactions and learn from previous financial dealings.
- 5. **Breadwinner's Financial Dilemma (BFD)** captures the struggle between providing for one's family and ensuring personal financial health.

The framework outlined in this study provides a conceptual map of a measurement instrument and is based on the five measures of FL that were identified among the OFWs in the UAE. Readers will find detailed descriptions of this measurement tool. This tool can be used for further studies on the level of FL among migrant workers so that other researchers using different designs, techniques, or units of analysis could test this tool's usefulness and generalize its applicability across various contexts.

CONCLUSION

This study has substantially contributed to the existing knowledge and body of literature on FL among OFWs in the UAE. Consequently, based on the EFA conducted in this study, this research has established that FL among OFWs is a complex construct with different factors, which supports the conclusion made by previous studies in the literature. The critical dimensions uncovered include proactive financial engagement, prudent financial management, strategic financial improvement, experiential financial competence, and breadwinner's financial dilemma. Indeed, these dimensions are part intrinsic to a thematic framework that has been proposed in order to facilitate the assessment of FL levels of OFWs.

The findings obtained in the framework of this study prove the Self-efficiency Theory proposed by Bandura (1977) to be correct, as it states that an individual's perceived self-capabilities greatly impact one's behavior. The positive correlation between FL and its dimensions thus indicates that the OFWs who are confident about their knowledge of how to manage their money and financial prowess are capable of making sound financial decisions. This keeps the theoretical framework valid; it also reveals the significance of financial self-efficacy on the financial behaviors of OFWs. Improving FL, therefore, entails not only instruction and increased self-efficacy of OFWs when it comes to managing their money, but

also providing them with the tools and confidence they need to resolve all their financial challenges towards attaining sustainable financial success.

RECOMMENDATIONS

Various stakeholders can use the newly developed measurement tool based on these insights. Given the dimension of PFE, financial education providers can tailor their programs to enhance OFWs' active involvement in financial learning and planning. For instance, FL workshops could incorporate modules on investment literacy and risk management, encouraging proactive financial behaviors. Furthermore, this tool might be helpful for government agencies and non-government organizations to assess the existing FL programs and activities and to evaluate where further concentration and focus are required.

The Department of Migrant Workers and legislators could also benefit from these findings by developing policies that support and protect OFWs' financial interests, such as creating more accessible financial services tailored for OFWs and their families. Furthermore, based on the result of this study, the financial sector can develop a product that targets OFWs to increase savings and investments in this sector.

Further research needs to confirm the reliability of the developed FL assessment instrument and assess its utility in other scenarios or among other target groups. More studies could be carried out using confirmatory factor analysis or another method to refine the tool and aid in the formation of the FL theories among migrant workers; the tool might be adjusted for specific goals or for a definite population subgroup.

Therefore, the results presented in this paper also provide empirical evidence for theories of financial conduct and demonstrate how important it is not only for individuals and their financial situations but for the nation and its economy as a whole. The identified dimensions of FL among OFWs support the need for policy intervention and financial education to help OFWs provide them with a better chance to become financially secure and enhance their impact on the host and home nations' economies.

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