



Article

Challenges in Understanding Western Economic and Financial Concepts from the Perspective of Young Adults with a Post-Soviet Migration Background in Germany—Findings from a Qualitative Interview Study

Sebastian Heidel *  and Roland Happ 

Institute of Business and Economics Education, Faculty of Economics and Management Sciences,
Leipzig University, 04109 Leipzig, Germany

* Correspondence: heidel@wifa.uni-leipzig.de

Abstract: The content of economic education in Germany is based largely on the laws and ideals of the prevailing economic system. While Western concepts such as the competitive market typically are addressed in economic programs in Germany, they may be unfamiliar in Eastern European countries that were part of, or under the influence of, the former Soviet Union, where many youths living in Germany originate. Findings from large-scale quantitative studies of economic and financial literacy in Germany indicate that people who have a migration background (MB) perform worse on tests of economic literacy than those who do not; however, these studies do not provide sufficient insight into the underlying migration-related causes of the deficits in economic literacy. In this study we investigate the influence of family financial socialization on young adults' understanding of economic and financial concepts. We interview eight young adults with a post-Soviet MB living in Germany using a two-part procedure: problem-centered and think-aloud interviews. We found that migrant parents directly and indirectly influenced their children's understanding of economic and financial concepts in numerous ways, and we maintain that the best way to remedy the deficits in their understanding of such concepts is through targeted programs and teacher training.

Keywords: economic knowledge; financial knowledge; economic education; financial education; family financial socialization; qualitative research; think-aloud interviews; post-Soviet migration background



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1. Introduction

To understand the increasingly complex economic interdependencies and financial products and to be able to make sound financial decisions, young adults need adequate economic and financial education (Brau et al. 2019, p. 180). Numerous studies have revealed a correlation between economic and financial literacy and a wide variety of factors such as age, gender, education, socioeconomic background, national economic development, experience with economic developments, and migration background (MB) (Cwynar 2022; Lusardi and Mitchell 2011; OECD 2016; Worthington and Marzuki 2022). Findings from research on economic and financial knowledge indicate that people who have an MB score lower on tests of economic and financial knowledge¹ than people who do not have an MB (for Germany, see Happ and Förster 2019; for other countries, see OECD 2019; Walstad et al. 2013). Financial and economic knowledge permits integration into the arrival society (Arnold et al. 2018; Jüttler and Schumann 2016), promotes financial independence, and from a macroeconomic perspective, contributes to the stability of an entire economy (Lusardi and Mitchell 2014). According to the 2021 census, 22.3 million people who have an MB² live in Germany, representing almost a quarter of the national population (GFSO 2022). Against this background and increasing migration to Germany and worldwide (McAuliffe

and Khadria 2020, pp. 39–40; GFSO 2022), a more in-depth examination of the barriers migrants face to understanding economic and financial concepts is urgently needed.

Research has revealed multifaceted reasons for lower levels of economic and financial knowledge among people who have an MB. For example, Happ and Förster (2019, pp. 6–8) found language to be a barrier but to a limited extent only. Even when the language of the country of arrival has been mastered, young adults who have an MB perform worse in all areas of study (Happ and Förster 2019, p. 6). Cwynar (2022, p. 400) and Zuhair et al. (2015, p. 373) found the level of economic development in the home country, experience with financial services in the home country, educational attainment, and socioeconomic background to be additional predictors of economic and financial knowledge among people who have an MB. These factors were found to influence not just one generation, but several generations of migrants via socialization processes (Danes 1994). The family has been identified as one of the most significant actors in the transmission of values, attitudes, behaviors, norms, and acquisition of financial knowledge within financial socialization processes (Danes 1994; Jorgensen and Savla 2010; Jorgensen et al. 2017). A pivotal period of financial socialization is early adulthood (ages 17–25) (Eliason et al. 2015; Lusardi et al. 2010), when young adults, for the first time in their lives, make independent financial decisions for which they bear the consequences. During this period, they move from financial parental dependence to financial independence (Serido 2022). Young adults who have an MB form a special group when considering the processes of family financial socialization, particularly regarding social and economic socialization factors. Within Germany, migrants from the former Soviet Union are a comparatively large group of inhabitants who have an MB, at just over 10% (GFSO 2022). Cwynar (2022, p. 400) points out that the economic systems of former Soviet states are very different from the economic systems of Western states due to the Soviet socialist past. Glorius (2015) also highlights that the dissolution of the Soviet Union brought about profound socialization experiences among nationals that were different from the previous system and that are passed down through generations. Considering various findings (Arnold et al. 2018; Cwynar 2022; Happ et al. 2019) it can be assumed that people in Germany who have a post-Soviet MB face major challenges in acquiring economic and financial knowledge based on Western laws and ideals. However, in Germany there is no national strategy to promote financial and economic education (Arrondel et al. 2022, p. 368), leaving people on their own to acquire financial and economic knowledge. Through socialization processes, the unfavorable situation can arise in which older generations of migrants pass on to their children their outdated and misaligned financial and economic knowledge (Danes 1994) acquired in the former Soviet states. For example, the insurance system in the former Soviet Union was marginal and compulsory and the pension system was organized completely by the state (Cwynar 2022). The citizens of these countries had little experience organizing these types of insurance and may feel overwhelmed by the decrease in social benefits provided by the state and the corresponding increase in personal responsibility for their own security in Germany.

Numerous quantitative studies have been conducted on the influences on the economic and financial knowledge of individuals who have an MB and those who do not, to identify associations and effects between factors and on knowledge (for Germany, see Erner et al. 2016; Happ and Förster 2019; for international studies, see OECD 2019; Zuhair et al. 2015). However, very little research has been conducted on the reasons for these correlations. Qualitative studies are particularly beneficial for exploring such correlations (Lapan et al. 2012). In this study, we investigate the influences of family financial socialization on the economic and financial knowledge of young adults who live in Germany and have a post-Soviet MB.

In Section 2, we provide an overview of the theoretical concepts of, and recent research on, financial and economic knowledge and family financial socialization of people who have an MB, and we present our research questions. In Section 3, we outline the research design and describe our survey instruments. In Section 4 we present our results. In

Section 5 we discuss some limitations of our study, implications for economic education, and suggestions for future research.

2. Conceptual and Theoretical Background

2.1. Economic Knowledge and Financial Knowledge

The concepts of economic and financial knowledge are embedded in the overarching concepts of economic and financial literacy and must be explained in the context of these (Happ 2020). Since the terms *financial literacy* and *economic literacy* first appeared in academic literature more than 30 years ago (Cude 2022, p. 5), interest in research in this area has increased steadily; however, there has been little agreement on the definitions of these concepts or how they relate (Cude 2022, p. 5; Haupt 2022, p. 79). In addition to different approaches to defining the two concepts, there is also a discourse on how to appropriately situate the concepts in relation to each other. In this study we adhere to the definition and classification of Happ's (2020, p. 10) integrative framework model, in which financial knowledge is a component of economic knowledge. Happ's (2020) conceptual foundations are aligned with those of Bosshardt and Walstad (2014) and Seeber and Retzmann (2017), among others. These modeling efforts stand alongside others that situate financial knowledge and economic knowledge as distinct concepts (Koh 2016). Pang (2010) and Koh (2016), for example, see basic financial knowledge as an extension rather than an integrative component of economic knowledge. In contrast, the integrative model offers a unifying approach that combines various interrelated concepts such as basic economic and financial knowledge, as well as corresponding components of basic economic knowledge such as macroeconomics and microeconomics (Happ 2020, p. 14).

Economic knowledge is essential for understanding fundamental economic processes and concepts (Happ 2020, p. 10). Economic knowledge is important not only for individuals, who need to make informed economic decisions related to personal finances, but also for society, as the stability and strength of an economy depends heavily on the economic decisions of its members (Walstad 1998). For these reasons, economic education is very important for society as a whole. The Council for Economic Education (CEE), in collaboration with renowned economists, developed economic and financial literacy standards reflecting 20 core concepts of economic activity such as allocation of goods, market and price, and competition (CEE 2010, 2021) to provide a framework and benchmarks for teaching finance and economics in primary and secondary school. However, these core concepts are based on the functioning and principles of Western economic systems, meaning several concepts (e.g., competition, market and price, entrepreneurship, and allocation of goods) may differ significantly between the planned economy model prevailing in the former Soviet states and the market economy model prevailing in the Western world (Cwynar 2022).

Although further conceptualizations of financial knowledge can be found in the literature and sometimes are used interchangeably, they often include additional, non-cognitive dimensions such as self-confidence, motivation, and attitude (Cude 2022, p. 8; Haupt 2022, p. 80). For example, the term financial literacy, which is commonly used in the English-speaking academic world. Wuttke and Aprea (2018, p. 274) define financial literacy as "the potential that enables a person to effectively plan, execute and control financial decisions." Another definition regarding this understanding beyond knowledge was formulated by Atkinson and Messy (2012, p. 14), who define financial literacy as "a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing". These definitions support the assumption that financial literacy is a multidimensional construct and that many aspects influence financial decisions. In this context, financial knowledge is given particular importance, especially as a basis for financially sound action (Cude 2022, p. 8). Similar to the term financial literacy, there is no single, agreed-upon definition of financial knowledge. Moreover, both terms—financial literacy and financial knowledge (Huston 2010, p. 296)—are used inconsistently, which can create inaccuracies in their use. In the current literature on the measurement and effects of financial literacy, financial

knowledge is understood as “the cognitive component of financial literacy” (Förster et al. 2017, p. 124). Extending the work of Förster et al. (2017), in which focus was primarily on the cognitive component of financial literacy, in this study our investigation is made additionally into affective components such as motivation and attitudes, as we suspect that these underlie the difficulties in understanding.

The following content areas of financial literacy developed by the CEE (2021) and consolidated by Förster et al. (2018) provide the framework for assessing financial knowledge in this study:

- everyday money management (EDM) (includes earning income and buying goods and services, practical example: lemon laws, guarantees, and consumer protection rights),
- banking (hereafter referred to as financial investing, includes saving and using credit, practical example: choosing among different credit options, credit and debit cards, investment options),
- insurance (includes protecting and insuring, practical example: choosing among different kinds of insurances according to personal needs and budget).

Personal characteristics that correlate with financial and economic knowledge are of particular interest in this study. Although MB has been found to be a predictor of financial and economic knowledge, with a particularly negative effect, it frequently is confounded with low socioeconomic status and limited formal education (Lokhande 2016). Cwynar (2022) found the state of economic development of the country of origin to be another predictor and claimed that if it is behind that of the country of arrival, it has an inhibiting effect on the economic and financial knowledge of migrants. Cwynar (2022) also found in studies of financial literacy that the socioeconomic background and educational background of migrants from former Soviet states and the economic development of those states were misaligned with the Western European average, with three exceptions: the Czech Republic, Estonia, and Hungary. However, differences also emerged in surveys of financial knowledge in Western Europe. For example, in the former Soviet states no gender differences in economic or financial knowledge were evident (Bucher-Koenen and Lamla-Dietrich 2018); however, this lack of gender effect is likely due to the generally lower level of economic and financial knowledge as well as the socialist system, which contrasts with the Western economic and financial systems that have been used as a reference for measuring financial and economic knowledge. The first research question (RQ 1) we explore in this study is as follows:

RQ 1: What challenges do young adults who have a post-Soviet MB face in understanding financial and economic concepts?

2.2. Family Financial Socialization

Socialization is defined by Hurrelmann et al. (2015, p. 25) as “a process through which relatively durable perceptual, evaluative, and action dispositions emerge at both the personal and collective levels in mutual interdependence between the basic biopsychic structure of individual actors and their social and physical environment.”

Hurrelmann (2015, p. 313) describes socialization from two perspectives: collective formation, as the assimilation of individuals into society; and personality development, as the adoption of socially desirable norms and values. Socialization involves processes encompassing all dimensions of, and influences on, personality development, regardless of whether they are intentional or unintentional, or structured or unstructured (Hurrelmann 2015, p. 315). Socialization thus involves family upbringing and formal education. Major political events and migration can influence socialization processes. For example, the dissolution of the Soviet Union fundamentally changed social and economic conditions for the people living there (Glorius 2015, p. 56), as the prevailing welfare state securities dissolved, and people had to adapt to a system of market-based processes previously unknown to them (Glorius 2015). This phase, called the transformation phase, was structurally similar to Western Europe’s second demographic transition, and it impacted socialization within the

family. Gudmunson and Danes (2011, p. 646) highlight the role that the unique relationship between children and parents has in socialization processes, particularly regarding financial matters. Jorgensen and Savla (2010, p. 466) state that regardless of whether parents have sufficient financial knowledge, children seek advice from them regarding financial issues. Danes (1994, p. 128) defines financial socialization as “the process of acquiring and developing values, attitudes, standards, norms, knowledge and behaviors that contribute to the financial viability and well-being of the individual.” Danes (1994) and Jorgensen and Savla (2010, p. 467) have identified the family as the primary agent for young adults’ financial socialization, and that communication in the home about finances has a significant and positive impact on financial behaviors (Jorgensen et al. 2017, p. 62). In this context, children develop financial knowledge, attitudes, and behaviors not only through intentional, or explicit, instruction from their parents, for example in the form of financial discussions and hands-on experiences (e.g., with pocket money), but also through implicit instruction in the sense of Bandura’s (1977) model learning, for example by observing parents participate in the community or make economic and financial decisions. Due to the great differences between the planned economy in the former Soviet states and the market economy in Germany, socialization processes in those countries can lead to misunderstandings. An example is the lack of competition in all markets of the planned economy, which meant there was no need for comparisons (Cwynar 2022). There were no choices in financial savings strategies to be made. Citizens of the former Soviet Union were not socialized to compare products according to various criteria and can be overwhelmed by the plethora of financial products on offer today in Germany. Consequently, they may not make informed decisions, and their actions may be copied by children through socialization processes. Young adults are influenced by their previous socialization experiences (Arnett 2001) through family, school, and peers (Shim et al. 2009); however, Gudmunson and Danes (2011) note that little attention has been paid to socialization processes in explaining and developing financial literacy. Gudmunson and Danes (2011) created a model (Figure 1) depicting the following family-related influences on financial socialization processes: personal and family characteristics, family interaction and relationships, and purposive financial socialization, with financial attitudes, knowledge, and capabilities, financial behavior, and financial well-being as control variables. The arrows show the different directions of impact. The authors note there are actors in addition to family that influence the socialization of individuals and their financial literacy. For this reason, the model is not comprehensive, but rather explanatory in terms of predictors of an individual’s financial education. We used this model to guide our qualitative evaluation of the data collected for this study.

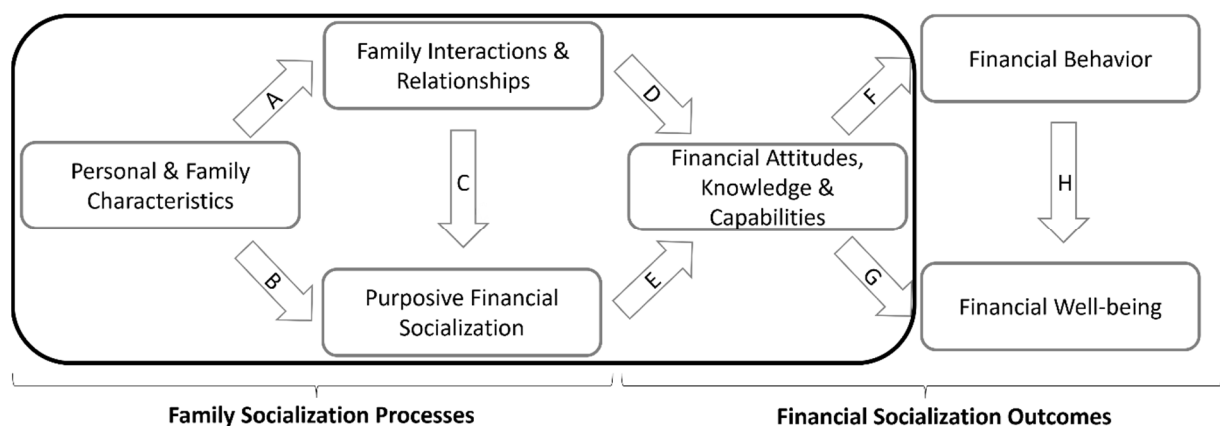


Figure 1. Model of the Processes and Outcomes of Family Financial Socialization. *Note.* Illustration based on Gudmunson and Danes (2011, p. 648).

Zuhair et al. (2015) add that personal and family characteristics of young adults who have an MB influence the psychological effects of experiences with discrimination and loss of trust in economic and financial institutions. They found, for example, that if young

adults did not trust the banks in their home country, they were more skeptical toward banking advisors in the country of arrival and, for example, they kept larger amounts of cash at home rather than in a bank account (Zuhair et al. 2015). This lack of trust also can be felt on both sides of the transaction. Banks tend to offer loans at higher interest rates or in smaller amounts to migrants, who often are at a socioeconomic disadvantage due to their lack of financial history in the new country (Zuhair et al. 2015, p. 374). Our second research question is as follows:

The aforementioned examples show how complex social influences are and what formative influences the family has on young adults. The focus in this study is young adults between the ages of 17 and 25, who tend to need less parental guidance in financial matters and strive for more financial autonomy (Arnett 2001, p. 138). Young adults often make independent and legally binding financial decisions for the first time. In doing so, they draw on knowledge and experiences they have gained to a considerable extent from their parents as part of family socialization processes (Braun et al. 2019; Shim et al. 2009). In view of the theoretical background, the following research question was derived.

RQ2: How does family financial socialization affect the economic and financial knowledge of young adults who have a post-Soviet MB?

3. Study Design³

Research on factors influencing financial and economic knowledge has been mainly quantitative (Gramatki 2016; Happ and Förster 2019; Mandell 2008; Walstad et al. 2013). However, the studies do not explain the reasons for these dependencies, how they arise, or why they lead to difficulties in understanding economic and financial concepts in the country of arrival. To explore the importance of family financial socialization on financial and economic knowledge, we developed a two-part procedure to collect qualitative data. The first part is a problem-centered interview (PCI) (Witzel 2012); the second part is a think-aloud interview (TAI) (Ericsson and Simon 1985; Leighton 2017; Van Someren et al. 1994). We developed the PCI based on findings of previous research, and we designed the TAI to reveal problem-solving processes involved in resolving personal finance decisions and, in the retrospective section, to reveal where problems arise in understanding financial and economic concepts (Leighton 2017, pp. 16–17). Considering the cognitive load theory (Sweller 2011) and findings from methodological research, that respondents' cognitive performance decrease after a certain amount (45–60 min) of time, we conducted the two-part procedure over two separate days.

When we contacted people to participate in our survey, we explained the general aim of our research (Witzel 2012) and the legal requirements regarding data protection and anonymization of the data. The PCI⁴ began with questions about sociodemographic background (Haupt 2022) and continued with blocks of questions about the following main topics:

- religion and values of respondents and parents (Glorius 2015),
- migration-related issues (Erner et al. 2016; Happ and Förster 2017),
- financial socialization (Cwynar 2022; Danes 1994; Glorius 2015; Gudmunson and Danes 2011).

The TAI consisted of a simultaneous (concurrent) and a retrospective part. In the concurrent part, the focus was on the disclosure of problem-solving processes. In this regard, Leighton (2017, pp. 21–22) states that problems must be new and dynamic so that they cannot be answered immediately based on knowledge. Leighton (2017, p. 21) justifies these requirements by stating that this is the only way to induce working memory to transform information and design new solution patterns to truly initiate problem-solving processes rather than rely on mere recall of knowledge. To gain further insights regarding RQ 1, it is necessary to investigate the processes involved in solving economic problems and retrieving economic knowledge from memory. For this purpose, we asked respondents to reflect on their thought processes and the reasons for their actions after completing the

problem-solving tasks (Leighton 2017, pp. 49–51). These two types of information required different instructions to keep subjects clearly focused on each process (Leighton 2017, pp. 43, 49). The items stem from the Test of Economic Literacy (TEL; Walstad et al. 2013) and the Test of Financial Literacy (TFL; Walstad and Rebeck 2016), both of which were developed to assess students' knowledge and understanding of personal financial and general economic topics in the United States. The TEL and TFL consist of items related to general financial content areas (on the TEL there are 45 items related to 20 core principles; on the TFL there are 45 items related to 6 content areas) developed by renowned researchers and proven to be reliable for use (for TEL, see Walstad et al. 2013; for TFL, see Walstad and Rebeck 2016). Both tests were adapted for use in Germany (for TEL, see Happ et al. 2016; for TFL, see Förster et al. 2017). Studies in Germany (Happ and Förster 2017, 2019) in which these tests were administered revealed that several items elicited no, small, or large differences in the frequency of correct responses between respondents with an MB and those without. Considering the differences between the response frequencies of the groups, we selected one item with no or almost no difference and two with larger differences from each content area of the TFL for a total of nine items (everyday money management, banking, insurance) and three items with the same criteria on the TEL. In total, we selected 12 items for the TAI. In the concurrent part all 12 items were used. For the retrospective part, 3 items were selected from the 12 items of the concurrent part. Two items were the same for all subjects and were selected with respect to the concept of competitive market and interest rates. The third item was rated by the subjects as the most challenging item. We selected items for our survey that had been used in quantitative studies to assess economic and financial knowledge (cf. Förster et al. 2018), the instruments for which had been based on average scores achieved on each item differentiated by group (i.e., with an MB and without an MB). The items were arranged in such a way that the difficulty of the questions initially increased (Krohne and Hock 2015) and slightly decreased again at the end of the test to avoid test fatigue (Leighton 2017). Before discussing how problems were solved, we asked respondents general questions about the ease of the interview procedure and difficulty of the questions, and where problems, if any, were encountered.

For our sample we selected young adults between the ages of 18 and 25⁵ with a post-Soviet MB⁶, when parental influences and experiences from childhood and adolescence are still strong (Hurrelmann 2015, pp. 315–18) and can be detected in financial decisions. Thus, we expected these respondents to be able to share insight into their answers to the RQs under investigation. Because educational background can influence financial and economic knowledge, to minimize possible biases within this survey, the respondents all had a secondary school diploma and were actively studying at a university in Germany. Further, none of the respondents had prior knowledge of economics in the form of a completed secondary school degree in economics, none had obtained commercial-administrative vocational training, and none had completed a program with economics as a major or minor subject⁷. We acquired participants mainly through information events in various faculties at Leipzig University or through connections related to their research on MB. Within these information events the background, the procedure, the aims, the requirements, and contact information were provided.

In line with Jacobsen and Meyer (2022, p. 221), who found 82% of minimal problems and 94.69% of average problems when surveying in maximum 10 subjects, we surveyed eight young adults. Determining a sufficient number of participants is nearly impossible due to the heterogeneity of the sample. Given the multi-ethnic composition of the former Soviet Union, the point of saturation (Saunders et al. 2018) in this sample is difficult to predict. Nevertheless, due to the considerable heterogeneity of the sample, we decided to recruit more than the original eight participants we had planned if necessary.

4. Results

4.1. Procedure for Data Analysis

Before analyzing our data by means of content analysis according to Kuckartz (2014), we transcribed the interviews according to simple transcription conventions. We included paralinguistic as well as verbal features (Kowal and O’Connell 2005), as these are of particular importance for the analysis. The paralinguistic features can reinforce interpretation of verbal content. For example, in the case of doubt or despair, a sigh or laughter underlines verbal expression and makes the interpretation clearer. Extra-linguistic features were not recorded because we expected no added value from these in the context of this study. Next, we derived deductive categories (see Section 4.3—categories 1, 2, and 3) for our data based on our RQs and findings from the literature. We examined the transcriptions several times. During these rounds of examination, we developed inductive categories (see Section 4.3—subcategories 1 and 2) based on the data, and we included them in our coding scheme, which we applied to the data during subsequent rounds of examination.⁸ This procedure is demonstrated in an example in Section 4.3 for statements that fall under category 1.

We give a brief definition of each category we derived for data analysis to show how we interpreted the respondents’ statements. Before presenting our qualitative findings, we provide an overview of the sociodemographic information on the eight respondents we gathered during the TAI, which will aid in the interpretation of their answers to questions during the two-part procedure and provide a link to the findings of previous research.

4.2. Descriptive Results

Based on the eight interviews conducted, the following section first presents sociodemographic data on the subjects. This is followed by an explanation of findings from the response distributions from the TAI as a starting point for the qualitative analyses of the transcripts.

The eight subjects met the participation requirements so that all interviews conducted could be transcribed and analyzed. Because studies (Asarta et al. 2014; Förster and Happ 2019) have revealed that in some countries gender influences financial and economic knowledge, we surveyed 4 males and 4 females. Other studies have revealed that language (Happ and Förster 2019) and socialization experiences of parents as well as those of the children can influence economic and financial knowledge of young adults (Brown and Graf 2013; Gudmunson and Danes 2011); therefore, we asked respondents about their “own migration experience”⁹. Three of the eight respondents had no migration experience (ME) of their own. Of the five respondents with their own ME, two were from Russia, one from Ukraine, one from Kyrgyzstan, and one from Latvia. The three respondents without their own ME had parents from Russia, Kazakhstan, or Azerbaijan. Further information on the respondents can be found in Table 1. The heterogeneity regarding the different former territories and countries offers a great potential to discover the different influences from the former republics. While the former republics as well as Russia were still under the influence of a unified political and economic system until the dissolution of the Soviet Union, different political systems emerged in the various post-Soviet states. Likewise, the economic systems and their performance developed differently (Cwynar 2022).

Table 1. Sociodemographic Data of the Respondents.

Respondent (R#)					Mother			Father		
	Country of Birth	In Germany Since	Mother Tongue	Age	Country of Birth	In Germany Since	Mother Tongue	Country of Birth	In Germany Since	Mother Tongue
1	Russia	2019	Russian	22	Russia	-	Russian	Russia	-	Russian
2	Germany	birth	German	21	Belarus	1999	Russian	Russia	around 1990	Russian
3	Germany	birth	German	18	Kazakhstan	1995	Russian	Russia	1995	Russian
4	Ukraine	2014	Ukrainian	24	Ukraine	-	Ukrainian	Ukraine	-	Ukrainian
5	Russia	2004	German	21	Kazakhstan	2004	Russian	Kazakhstan	2004	Russian
6	Germany	birth	Azerbaijani	20	Azerbaijan	2000	Azerbaijani	Azerbaijan	before 2000	Azerbaijani
7	Kyrgyzstan	2017	Russian	21	Kyrgyzstan	-	Russian	Kyrgyzstan	-	Russian
8	Latvia	2016	Latvian	24	Latvia	-	Russian	Latvia	-	Russian

Note. The order of participants follows the chronological series of survey dates.

In line with the findings of Schmid (2006), our findings indicate that respondents gave correct answers to most questions in the area of economic knowledge and performed best in this area in the TAI (for detailed information on the answers given, see Table 2). With 20 correct answers out of 24¹⁰, respondents perceived the level of difficulty of economics-related questions to be low. In addition, six respondents said they perceived tasks from the TEL to be the easiest. In all three areas of the TFL, respondents answered 14 questions correctly out of 24. Four of eight subjects said the most difficult question was about banking (TFL, items FA20 and FA21¹¹). Three of these four said the question about the benefit of the company pension plan (TFL, item FA20) was the most difficult. Two respondents claimed they had the most difficulty answering questions about insurance (TFL, items FA45 and FA48) and one respondent claimed to have the most difficulty answering a question about everyday money management (TFL, item FA5). One respondent found all country-specific questions to be the most difficult. Country-specific questions were those in which financial or economic concepts were unfamiliar internationally or in the home country, such as income tax, types of insurance, and retirement systems. The question on the advantage of company pension schemes (item A20) was answered correctly by only three respondents. The question about which type of insurance covers self-inflicted damage to one's own car (item A48) was answered correctly by only two respondents. The question about what can be deducted from one's gross income before income tax is calculated (item A7) was answered correctly by only one respondent. This one correct answer was based on knowledge gained through the media.

Table 2. Response Distributions.

TEL/TFL Area	Correct Answers (8 Resp.)	Rate in %	Male (4 Resp.)	Rate in %	Female (4 Resp.)	Rate in %	With ME (4 Resp.)	Rate in %	Without ME (4 Resp.)	Rate in %
TEL	20	83.33	11	91.67	9	75.00	11	91.67	9	75.00
TFL EDM	14	58.33	7	58.33	7	58.33	7	58.33	7	58.33
TFL banking	14	58.33	8	66.67	6	50.00	8	66.67	6	50.00
TFL insurance	14	58.33	7	58.33	7	58.33	9	75.00	5	41.67

Note. The column "correct answers" is based on the full sample of eight respondents; 24 correct answers in each area is possible. The columns "male", "female", "with ME", and "without ME" are based on four respondents; 12 correct answers in each area is possible.

4.3. Qualitative Results

In preparation for data analysis, we created three categories for the respondents' comments based on our research questions and previous research findings in this area (Kuckartz 2014, p. 64). The analysis and coding process were conducted using the MaxQDA software, 2020 version. Each category was developed according to content, reasons, and delimitations (Kuckartz 2014, pp. 66–67) and are as follows:

- **Category 1 (deductive):** Challenging financial terms and concepts
 - Subcategory 1 (inductive): Challenges related to country of origin
 - Subcategory 2 (inductive): Challenges related to language

- **Category 2 (deductive):** Challenging economic terms and concepts
- **Category 3 (deductive):** Influence of family financial socialization

In Table 3 the category “Challenging financial terms and concepts” is provided as an example.

Table 3. Definition of Category 1.

Challenging Financial Terms and Concepts	
Content	Financial terms and concepts unknown or unfamiliar to respondents, as they cannot explain them adequately.
Reason	Cultural- or country-specific differences, lack of equivalent terms or concepts, or language challenges may be reasons for finding the terms and concepts challenging.
Example of response	“Uh I don’t know exactly what warranty uh right is, but um yeah with that I kind of can’t quite answer the question either” (R2, TAI, para. 23).
Delimitation	Statements about economic concepts such as competitive market, functions of money or the labor market are assigned to category 2.

While coding our data, we found it useful to expand the three categories we deduced prior to analysis to include additional categories tapped directly from the data we collected (Kuckartz 2014, p. 64). We divided category 1 into deductive categories and inductive categories (see Subcategory 1 and 2) based on our findings.

Regarding category 1, we found that the respondents experienced barriers related primarily to financial knowledge. Two additional categories were formed based on the respondents’ direct statements.

Challenging financial terms and concepts related to the country of origin were those that differed between the home country and the country of arrival. These questions tended to be about social security, insurance and banking instruments, and tax regulations. The challenges were related to systemic and legal differences between the two countries. Difficulty in understanding these financial terms and concepts also occurred when financial instruments were misused in the country of origin due to a lack of law enforcement.

One problem mentioned by some of the respondents was that they did not understand how the various types of pension plans and insurance policies work. In the area of insurance, the respondents gave a variety of reasons why these concepts were difficult to understand. For example, in Kyrgyzstan and Belarus, all permanent residents have basic national health care (WHO 2021). For this reason, addressing the concept of health insurance is necessary only for treatments that exceed basic care. In addition, insurance policies differ among the former Soviet states. Although similar in nature, insurance policies have a different legal basis and binding force in former Soviet states than, for example, liability or comprehensive insurance in Germany (see RQ 1).

“So the questions with insurances were always the most difficult, because you don’t have so much to do with that in Russia (. . .) and in Germany, for example, there are these uh compulsory insurances for all of us.” (R1, TAI, Retrospective Part, para. 67)

Furthermore, the respondents argued that a lack of trust in the insurance companies and their services leads to a negative attitude as well as less engagement.

“So the insurance companies always try or always had as a goal, uh in the case where they have to pay this insurance, they always try not to pay this insurance, to find a reason for it. They say: well it doesn’t apply to the insurance they chose [. . .] okay we promised so and so much money to them, but this is a different case, with the case we have to pay less.” (R1, TAI, Retrospective Part, par. 68–71)

Regarding the various pillars of old-age provision, most respondents experienced several barriers. Many equated occupational pension provisions with statutory pension insurance and argued accordingly. Here, a particularly uniform response behavior can be

seen in the incorrect answers. For example, five of the eight respondents answered that the advantage of occupational pensions is that the state guarantees a minimum return. In addition, during the reflection part of the interview, the respondents could not identify the three pillars of old-age provision due to their lack of knowledge and therefore were unable to differentiate between them (see RQ 1).

"I have to say I actually don't think the company pension plan is good because I think we have uh too many, so as our, as our population gets older and older and a lot less people working a lot more people have to cover who just depend on the pension, I think private pension insurance is necessary." (R2, TAI, item FA20, para. 29)

Regarding the concept of income tax, it seems the respondents for the most part had no idea what processes are involved in calculating income tax. For example, only the answer options that generated income seemed plausible to the respondents. The fact that certain types of costs could be deducted from the taxable amount and thus lead to a reduced tax burden was largely unknown (see RQ 1).

Another finding was the one-dimensional interpretation of the concept of interest. It was surprising to find that when respondents were answering the question about interest during the reflection part of the interview, they had only one interpretation of the concept, which was that interest is payable when people borrow money.

"You get money from a bank and then you have to pay this money back to the bank and you pay more, precisely because of the interest. That's more or less the share of the sum that you then pay back over it." (R7, TAI, Retrospective Part, para. 211)

The other perspective, that interest is a form of income from investments, was not mentioned. This one-sided view is understandable taking into consideration that respondents claimed their parents did not have investments. Even the respondents who made their own investments maintained this perspective, so it is quite possible to speak here of a family-socialized anchored concept unknown to the young adults. Respondents also claimed that their parents did not trust this type of investment (see RQ 1).

Linguistic challenges were evident, for example, in expressions of the following terms:

- Minimum return, deductible, warranty law, overdraft interest rate:

"Gewähr? Is it Gewähr something like guns and stuff?" (R8, TAI, item FA13, paras. 29–44)¹²

"for example, if I knew what an overdraft interest rate was, I might have thought about answer choice 2." (R5, TAI, Retrospective Part, para. 150)

Category 2 Challenging economic terms and concepts includes statements about economic terms or concepts that the respondents considered to be unknown or unfamiliar, which was confirmed from our recordings in which the respondents could not adequately explain them. We found that respondents who had a post-Soviet MB had little or no difficulty understanding the question about economic reasons for the increase in the amount of gasoline sold; however, all respondents wanted to explain an increase in price, not in the amount of gasoline sold. because they had read the question too quickly and not carefully enough. Only one respondent showed difficulty comprehending the question about the concept of the competitive market (R8, TAI, item EA 16, para. 87). We found no other economic concepts challenging for the respondents based on their questions or comments.

We assigned statements reflecting experiences with, perceptions of, discussions about, and actions related to family financial socialization to category 3. We paid attention to different kinds of socialization processes. There are processes which were implicit, only unintentionally observed, and unsystematic, as well as explicit, consciously perceived, and systematic socialization processes. In this category, multiple sources of challenges in understanding economic and financial concepts emerged.

Thus, R4 claimed that Ukrainians tend to save money¹³ to be prepared for crises such as the current Russian invasion in Ukraine. This respondent also reported that investment is not common in the families in Ukraine and thus cannot be understood by the children.

“Um, yes, maybe so. And um . . . here I also have to say about saving for example, [. . .] that the . . . the Ukrainians as a nation—but I think this is related to the conditions in which people live—they tend to save money rather than spend a larger sum on something right now.” (R4, PCI, para. 153)

Saving for everyday items is the focus of financial considerations. Specifically, larger sums of money are kept in the checking account or at home. No regular savings plan is pursued; rather, savings are made only when money is left over from everyday expenses (see RQ 2).

Regarding family financial socialization, not all respondents were familiar with some financial behaviors in the home that were discussed in the interview such as giving pocket money.

“So we kind of didn’t have anything special in the family like: I have to clean the house now or something to get pocket money, no. I just got it from my parents.”. (R4, PCI, paras. 292–95)

This may also be because the parents of Soviet-influenced young adults represent and convey different values (see RQ 2).

“So with my parents, their whole life was about giving me and my sister a financial security and I don’t know, they actually worked their whole life to make sure that now with my sister we have enough money to study here [Germany].” (R7, PCI, paras. 142–43)

The respondents said very little about economics and finance in general or current economic or financial events (R5, PCI, paras. 204–13). R4 mentioning buying an economic newspaper is one of two exceptions among the eight respondents. The parents of this particular respondent have a degree in an economics-related subject and have an interest in economic and financial topics (R4, PCI, para. 241).

Regarding family financial socialization, it is evident that financial and economic topics play a lesser role within families. Neither in joint discussions about financial or economic topics nor in conscious value statements, for example in the allocation of pocket money, do these topics receive appropriate consideration. If these topics were discussed within the family, saving money was considered preferable to other forms of investment. This is perhaps the reason for the little effort of three male subjects to make investments or to make investments without consulting their parents. Most of these investments were in cryptocurrencies, which began to lose value shortly after the investments were made. Real estate is seen as the only stable and reliable asset (see RQs 1 and 2).

One respondent indicated that the loss of money from a poor investment caused such a great loss of confidence in her family and their relatives that investing money is no longer considered at all. Alternatively, saving money, sometimes even in the form of cash at home, is the preferred “investment.” In this case, parents still in the home country with little knowledge of financial institutions in Germany were sought out for advice.

“There were times when these investments were actually quite (. . .) popular (. . .) among the population and there were a few companies that you could invest in. These were huge funds and unfortunately (. . .) you could not trust these people, these funds. (. . .) unfortunately they lost everything they invested. And there was, so to speak, a case that is very well known so with, with MMM¹⁴ for example. But there were also other cases and there still are, but by the fact that now people don’t really trust this advertising anymore.” (R4, PCI, para. 325)

Further, lack of attention paid to the issue of insurance in the parental household, or the overprotection of parents was cited as reasons for the lack of knowledge needed to answer questions (see RQ 2).

“No, so, the [parents] insure me, I’m already insured somehow, but how? So the, so my mom makes insurance for me on everything, (. . .) in which case I’m guilty or not, but she said if anything happens, you have insurance, actually insured for everything, that’s why it doesn’t matter what happens to me. Yeah and that’s why she didn’t explain anywhere what exactly is what and so, yeah.” (R8, TAI, Retrospective Part, paras. 136–37)

The argument often put forward by the respondents was that they were still too young and, because of their studies, did not yet earn enough money to be able to provide for their old age. They claimed they would do this when they earned their own money after graduation. Occupational and private retirement planning require a certain amount of personal activity and trust in institutions that deal with finances. Due to negative experiences and little or no investment activity on the part of their parents, it can be assumed here that options for private old-age provisions are not considered due to having an MB.

5. Discussion, Limitations, and Outlook

5.1. Discussion

In this qualitative study we explored how an MB might impede understanding of economic and financial concepts. We used a two-part procedure to interview eight young adults living in Germany who have a post-Soviet MB and to identify the difficulties they encounter when trying to understand Western economic and financial concepts and the causes of those difficulties.

Regarding RQ1, barriers to understanding financial concepts occurred predominantly due to a lack of financial knowledge. In particular, the respondents revealed having difficulties understanding concepts related to insurance, old-age provisions, and financial investments. When it came to understanding economic concepts, there were almost no barriers (this is consistent with the findings of [Schmid \(2006\)](#)). Despite the fact that the participants answered the economic questions mostly correctly, the advantages of the think-aloud method become apparent. In both parts, the simultaneous and the retrospective, the tasks ask for reasons and explanations in finding an answer. Thus, even with correct answers, variations in understanding can occur. For example, if a participant guessed the correct answer but provided a different rationale, a misunderstanding could be identified. In the area of insurance, legal and functional differences between the country of origin and Germany caused difficulties, which became evident when the respondents did not know which insurance companies settled which claims or to what extent, and they were unfamiliar with the insurance instruments presented. Furthermore, as [Cwynar \(2022\)](#) points out, parents who grew up in the Soviet Union probably experience difficulty understanding insurance coverage in Germany due to the diversity of products on offer, the competition in the insurance market, and the array of benefits available today compared to those of the controlled Soviet system, and their lack of understanding makes them ill equipped to support their children in such matters. In addition, respondents were unfamiliar with various pension plans. The respondents could hardly distinguish private old-age provision from state provision and sometimes equated occupational pension provision with statutory pension insurance. Furthermore, language-related challenges were particularly noticeable among respondents who had had their own migration experience. This means that these respondents, in contrast to those without an MB, could not derive meaning from terms such as warranty law or overdraft interest from individual word components. These challenges were exacerbated when there were no equivalent concepts in the home country for the translated terms. This shows that young adults who have an MB face highly specific, migration-related challenges, especially when it comes to concepts of protection against risks. In addition, they had linguistic difficulties in understanding specific financial and legal terms in German.

Regarding RQ2, very few intentional socialization activities occurred within the respondents’ families that were conducive to understanding the Western financial sector. Referring to the model of [Gudmunson and Danes \(2011\)](#), personal and family characteris-

tics emerge as the most influential factor. Saving propensities, risk aversion, and financial investments are influenced by socialization (Cwynar et al. 2019), and the realities of parents are absorbed by children in different ways. In some cases, children are not encouraged to think about economic or financial issues or are encouraged to invest outside of regulated markets, such as in cryptocurrencies. Long-term investment strategies in the financial markets are not pursued much or at all by either the parents or the children. In contrast to investing in cryptocurrencies, savings tendencies are reinforced by targeted reinforcement stimuli in intentional actions such as pocket money. In Germany, children are shown that saving should be a top priority. The tendency to save is supported by observations and conversations within families. In this study respondents witnessed cash being stored at home and were taught to see this as positive and safe. Discussion within the respondents' families about insurance and retirement planning hardly took place. Thus, the children adopted the notion that real estate was a suitable retirement plan. The parents of the respondents owned real estate partly as a pension provision. Regarding other investment strategies, however, they lacked interest, knowledge, confidence, and equivalents in their respective home countries. Real estate was mentioned as the only trustworthy investment. The respondents' parents' low level of trust in governmental and financial institutions from the country of origin (e.g., in investment and insurance companies), which was partly due to negative experiences in the country of origin, was also transferred to the children, who avoided professional counseling and sought advice from acquaintances or family members. These findings are consistent with observations by Zuhair et al. (2015).

5.2. Limitations and Outlook

The data in our study were obtained from a small sample; therefore, the findings can be interpreted only as initial indications of approaches needed to address barriers to young adults in Germany with a post-Soviet MB face in understanding financial concepts. Due to the complexity of the causes of deficits in economic knowledge among young adults who have an MB, more in-depth research is needed to gain a more comprehensive picture of the difficulties this particular group faces in understanding various economic and financial topics. The methods we used to gather data allowed us to obtain subjective, and possibly skewed, information. Cwynar et al. (2019, p. 20) mention that especially in studies in which socialization processes are investigated, a two-sided perspective on socialization processes must be adopted. This means that, for example, a certain part of a child's socialization process should be discussed with the parents to obtain a more comprehensive picture of the causes of, or reasons for, possible behavioral dispositions. In this study only one point of view of the financial socialization process, that is, the child's point of view, was explored. A survey of the parents' financial socialization experiences in the context of the dissolution of the Soviet Union would permit a deeper analysis of the socialization and economic processes immediately after the dissolution. Moreover, many ethnic groups were living in the Soviet Union at that time (Panagiotidis 2021). The criterion "post-Soviet MB" encompasses all these different groups and thus diminishes individual characteristics of members of those groups, and in the end, this can lead to a simplification of the diverse backgrounds, cultures, and influences. The different economic and political developments of the former republics after the collapse of the Soviet Union alone can be indications for different preconditions and differences in the societies (Cwynar 2022). These differences are reduced by grouping them under the criterion "MB from the former territory of the Soviet Union" and thus do not come into play comprehensively. In the retrospective part, the respondents showed and later confirmed that most of them were not familiar with the process of thinking aloud while answering questions—especially with an unknown person in the room—at the beginning of the questioning. Despite the warm-up tasks provided for this purpose, they needed a little time to get into the flow. As Leighton (2017) states, the method itself can influence thinking and inhibit the actual problem-solving process. However, as the interview progressed, respondents became more comfortable with the method and confirmed they had no major issues in the problem-solving process.

Nevertheless, it can be noted that the results provide an insight into barriers and show that the number of participants was adequate to reach saturation (Saunders et al. 2018). Furthermore, we will investigate further groups with an MB and a control group as well.

As shown in Section 4, there were barriers to understanding, especially regarding the concept of financial knowledge. The respondents' statements suggest there are many reasons for the barriers they encounter to understanding economic content presented through family financial socialization. Socioeconomic background is another influencing factor. Some indicators (e.g., parents' occupation, parents' education, assets, etc.) were included in the interviews to cover this issue. These questions were not problematic from a legal perspective. Deeper and more detailed questions were not permitted within the qualitative research design for privacy reasons. Sociodemographic influences should be taken more into account in further studies. It should be noted that socioeconomic background is not independent of MB. Thus, the migrant-specific reasons account for both. This also means there is less potential within the family to overcome these barriers. Against this background and with increasing immigration (GFSO 2022) and the challenges of integration that come with it, learning opportunities should be created that address the specific migration-related needs of newcomers to Germany, and they should be offered not only to youths but to adults as well. Migrant parents are raised in an economic system and financial system different from those prevalent in Germany today (Cwynar 2022), and to a large extent, parents pass on their outdated knowledge to their children (Gudmunson and Danes 2011). Although some economic topics may be addressed in community courses for adults in Germany, they often are taught superficially and unsystematically (Arrondel et al. 2022), and so deficits in financial knowledge among migrants prevail and their children cannot gain important economic knowledge through family socialization. Zuhair et al. (2015) point out that the "feeling of being understood" motivates integration among people who have an MB. In addition to taking a more differentiated instructional approach oriented toward the needs of people who have an MB, teachers must develop intercultural competencies and didactic diplomacy when addressing potentially sensitive issues (Solga and Dombrowski 2009). For example, as the findings from this study indicate, the focus should be on financial concepts typical in the country of residence. However, it is not enough to work only on individual points.¹⁵ As indicated, these migration-related adjustments require coherent adaptation. A merely separate implementation of these adjustments, for example in teacher training only, does not go far enough and does not meet the requirements of the complexity of integration processes. This means that the various actors and institutions must connect their work and, in addition to the migration-conscious training of teachers, the integration of migration-specific aspects into the design of teaching materials and the inclusion of these topics in the curricula must be considered.

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Appendix A

Table A1. Description of the question areas.

Main Category	Subcategory
Sociodemographic details (Witzel 2012; Haupt 2022).	<ul style="list-style-type: none"> - Educational background - Educational background of parents - Socioeconomic situation of the respondents and their parents
Religion and values of the respondents and their parents (Glorius 2015)	<ul style="list-style-type: none"> - Importance of values for respondents in everyday life and in financial and economic activities - Development and source of values - Importance of religion for respondents in everyday life and in financial and economic activities - Development and source of religious values
Migration-related issues (Erner et al. 2016; Happ and Förster 2017).	<ul style="list-style-type: none"> - Migration experiences of the respondents and their parents - Language (at home and outside of home)
Media use (Arnold et al. 2018; Schäfer 2022; Schnell 2017).	<ul style="list-style-type: none"> - Parents' media use during the respondents' primary socialization phase - Information behavior of the respondents - Communication about media and current events within the family - Interest in financial and economic topics
Financial socialization (Danes 1994; Gudmunson and Danes 2011; Cwynar 2022; Glorius 2015).	<ul style="list-style-type: none"> - Personal importance of finances - Financial socialization (pocket money, decision-making roles and behaviors within the family)

Table A2. Description of the items.

Number of the Item	Description
Item FA5 (EDM)	This item asks about economic developments affecting increases in construction wages. Responses refer to the effect of an increase in loans issued for residential construction, more graduates seeking employment in the construction industry, an increase in interest rates influencing a downturn in the construction industry, and tougher oversight by building inspectors on new construction projects.
Item FA7 (EDM)	The item refers to the concept of income tax and which of the given answers can reduce the amount of taxable income. The selection of answers ranges from speculative gains and interest to costs for food and donations.
Item FA20 (Banking)	The question refers to the advantages of a company pension plan compared to a private pension plan. The selection of answers ranges from voluntary payments by the employer, unlimited number of payments by the employer, tax-free pensions, and state-promised minimum returns on occupational pensions.
Item FA21 (Banking)	The item asks about the banking priorities of someone who is continually in debt. The answers revolve around the lowest bank account fees, the lowest overdraft interest rate, the shortest payment period for debt repayment, and the lowest fee for a replacement card.
Item FA45 (Insurance)	The item asks about measures taken by insurance companies to encourage policyholders to engage in lower-risk behavior. The answers deal with co-payments in the event of a claim, the elimination of premium refunds, insurance policies without deductibles, and low premiums for insurance.
Item FA48 (Insurance)	The item asks about the type of insurance that covers self-inflicted damage to one's car. The selection of answers covers different kinds of insurance.
Item EA16	The item asks about which scenario would lead to an increase in gas sales. Increase in crude oil price or petroleum tax, decrease in car prices or decrease in consumer income.

Notes

- ¹ In this article, a deliberate separation is made between economic knowledge and financial knowledge based on the integrative framework model (Happ 2020). Overlapping statements about the separation of these two concepts sometimes prevail in the literature (Happ 2020; Koh 2016). Similarly, there is inconsistent use of the following terms: education, literacy, knowledge, skills, abilities, and skills (Haupt 2022). In this article focus is on the knowledge components of economic and financial literacy.
- ² The Federal Statistical Office of Germany identify people as having an MB if they or at least one of their parents was born in a country other than Germany (GFSO 2015).
- ³ The ethical commission and data protection officer of Leipzig University were informed and had no objections.
- ⁴ A more in-depth description of the question areas can be found in the Appendix A (Table A1).
- ⁵ Deviating from Lusardi and Mitchell's (2014) definition of the sensitive financial phase, the lower age limit was raised to 18 in the study. This was accompanied by lower legal requirements than would have been necessary if minors had been interviewed.
- ⁶ The aim of this paper is not to compare groups with and without a migration background, but rather to identify particular barriers and challenges of one specific group. Therefore, no control group was considered at this point, which is usual for explorative studies in social sciences (see e.g., of different fields Davis et al. 2019; Fiedler and Wohlfarth 2018; Jaeger and Haley 2016; Klingler and Marckmann 2016; Lewthwaite 1996; O'Dea and Stern 2022).
- ⁷ The subjects should not have started or completed a commercial/administrative vocational training program, should not have taken the Abitur (A-level) at a business secondary school, and should not have started or completed a business degree program, not even as a minor subject. Vocational training in Germany equips learners with professional competencies, experience, skills, abilities, and knowledge. Vocational training in Germany is organized in various ways. There are school-based training programs and training programs with two learning locations: in school and in a company (dual vocational training). In dual vocational training, trainees alternate between the predominant place of learning in the company and school. Trainees receive a training allowance for the entire training period—regardless of whether they are at school or in the company (Cedefop 2020). Due to the acquisition of knowledge of economic and financial matters within commercial-administrative vocational training programs and the associated formal financial socialization experiences, this was defined as an exclusion criterion.
- ⁸ Two researchers were involved in coding to maintain acceptable intercoder reliability.
- ⁹ The German Federal Statistical Office defines people with a migration background as described in note 2. This definition does not indicate whether the persons themselves have had migration experiences. People's own migration experiences are significant socialization processes that have a formative influence on their understanding of economic and financial concepts. In order to highlight this distinction in our sample, the criterion migration experience was surveyed and listed in the table.
- ¹⁰ There were three questions from each area of the TEL and three questions, each from one area of the TFL: everyday money management, banking, insurance. All eight respondents gave correct answers.
- ¹¹ The questions were asked in German. These questions are subject to copyright and may not be published. The original TEL and TFL are available in English and can be accessed freely on the Internet. The original American items on the TEL or TFL are referred to in brackets (E for an item of TEL and F for an item of TFL, e.g., (item FA3)). A more detailed description of the items can be found in the Appendix A (Table A2).
- ¹² In German, the morpheme "Gewähr" in Gewährleistungsrecht is phonetically identical to the German word "Gewehr"—which means pistol. Gewähr is the German translation for warranty, which is a legal regulation designed to protect consumers from deficient products.
- ¹³ The article refers to the understanding of saving in the sense of "not spending money". The paper and also the statements of the respondents do not take into account whether the money is safe in the bank or in bank accounts. Respondents indicate that saving is an important way to prepare for potential crises. This is not in the sense of safe money in banks.
- ¹⁴ The MMM cooperative, named after the surnames of its three founders Sergei Mavrodi, Vyacheslav Mavrody, and Olga Melnikova, was an investment fund in Russia in the early 1990s that operated as a Ponzi scheme. A lot of money was collected with the promise of excessive returns and the sale of company shares. The money was stolen by the founders and a large number of people in Russia and former Soviet republics lost their money (Tolstikova 1999).
- ¹⁵ In this paper, qualitative methods were used to explore barriers to understanding economic and financial concepts among young adults with a post-soviet background in Germany. The knowledge gained can be used to inform pedagogy in many ways, for example to develop learner-oriented educational materials, to design relevant and engaging lessons and assignments, to train teachers effectively, and so on. Although policies and societal implications need to be explored if appropriate changes are to be made to secondary school education, these issues are beyond the scope of this paper and should be addressed in further research.

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