


# The role of financial capability and culture in financial satisfaction

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## Abstract

This paper presents an integrated framework for understanding the determinants of financial satisfaction in the context of two European nations with different cultural environments. The direct, indirect, and interactive effects were tested through the path analysis method. It was found that to be financially capable is imperative because it governs the impacts of financial attitude and financial knowledge on financial satisfaction. Moreover, findings show that culture matters in explaining differences between countries. Hence, individualistic societies, compared to collectivistic ones, reflect a stronger relationship between financial attitude and financial satisfaction. Additionally, countries showing a high propensity in avoiding uncertainty reflect a negative association between risk tolerance and financial satisfaction, while those lacking such preference manifest a positive relationship.

Keywords: financial satisfaction, financial capability, financial advice, risk tolerance, culture.

## 1 Introduction

Scholars have recognized finance as one of the major factors associated with overall well-being and the least understood domain of subjective well-being (Netemeyer *et al.*, 2018). Subjective well-being relates to an individual's assessment of one's life which can be measured by means of life satisfaction and influenced by an individual's mindset and emotions (Diener & Chan, 2011). Overall, life satisfaction is multi-faceted and dynamic (Campara *et al.*, 2017). An individual's life satisfaction consists of satisfaction in diverse areas of life clustered around a few major domains of life (Rojas, 2006). Loewe *et al.* (2014) covered seven key life domain satisfactions, including financial situation, which were investigated among workers to determine predictors of overall life satisfaction. Therefore, any research can have at its centre one or a combination of identified domains (Rojas, 2006). Based on this, the focus of the present study is on financial satisfaction and its determinants.

Financial satisfaction is an indicator of financial well-being and an important constituent of overall life satisfaction (Woodyard & Robb, 2016). Financial satisfaction varies across nations (Diener and Diener,

2009) and it is a function of financial constructs and individual demographics (Castro-González *et al.*, 2020; Strömbäck *et al.*, 2017; Xiao and O'Neill, 2018). Although there is an adequate body of research covering different interconnections between financial satisfaction and its determinants, yet there is a growing need to investigate the influences of financial constructs on financial satisfaction in a cultural context. To bridge this gap, this work is designed to investigate the role of financial capability as mediator and culture on an individual's financial satisfaction. Further investigation of literature found the number of vital variables which are directly affecting financial satisfaction such as financial knowledge and risk tolerance (Joo and Grable, 2004), financial attitude (Falahati *et al.*, 2012), financial capability (Xiao *et al.*, 2014), and financial advice (Moreland, 2018). The present study offers an integrated framework to bring out a broad picture of factors affecting financial satisfaction and comprehend it vividly. These determinants are collectively referred as financial constructs.

Wrong financial decisions regarding short-term and long-term plans, such as retirement, can negatively affect an individual's financial satisfaction (Aboagye and Jung, 2018; Greenberg and Hershfield, 2019; Lusardi and Mitchell, 2014; Lusardi and Mitchell, 2007; Lusardi and Tufano, 2015). These wrong decisions can be made due to individuals' failure to evaluate them properly because of low levels of financial knowledge, financial attitude, and financial behaviour. Researchers believe the improvement of financial literacy can help in this regard (Çera and Tuzi, 2019; Lusardi and Mitchell, 2014; Lusardi and Mitchell, 2007). Instead of looking at financial literacy, this study examines financial capability as a wider financial concept since it has to do with the ability and opportunity to act.

Financial capability is receiving importance around the world due to a number of reasons. Firstly, economic volatility and complex dynamic environment prove to be challenging on how best to make right financial decisions (Atkinson *et al.*, 2007). Wrong financial choices on products, either because of poor knowledge or miss-selling from service providers, will not grant satisfaction to all individuals. To this end, both adequate financial knowledge and financial behaviour are needed. Financial capability reflects adequate financial knowledge and the ability to manage complex saving and investment decisions (Çera, Phan, *et al.*, 2020; Shkvarchuk and Slav'yuk, 2019; Taylor, 2011). Secondly, according to the Ageing report (EC, 2017), the old age population is expected to grow drastically in the European Union (EU) region by 2070. So, the financial dependency of elderly people on government, insurance, and social security funds will rise steeply. To tackle this, the authorities are adjusting their role accordingly. They are trying to shift the responsibility onto individuals in order for the latter to plan and manage their adequate financial resources well ahead of their retirement or hard times like economic uncertainties and old-age financial securities (Atkinson *et al.*, 2007). To make individuals financially independent and to reduce the burden on the state there is a need for adequate financial capability. Thirdly, different countries have reflected the diverse influence of the economic catastrophe of 2007 on their economy quite differently (Long *et al.*, 2012). It has also been established that some countries sustained a severe economic impact due to that crisis (WB, 2009). Countries with high household saving rates and preference to hold on to fixed and secured investment protected their economy much better when compared to other countries which had a wider exposure to the equity segment. Many factors are contributing to this situation and one of them relates to people's risk-aversion attitude. It would be interesting to measure this by looking at the influence of culture on people's financial behaviour. Therefore, financial capability can empower individuals to make themselves capable of understanding, visualizing, and protecting their finances in the volatile financial environment, which ultimately leads to financial satisfaction.

Government agencies, social organizations and social practitioners are prone to join efforts in order to achieve financial satisfaction by promoting financial capability with an objective to providing a favourable environment to individuals in such a way that they are able to understand the complexities of their finances, to make right financial decisions, and plan wisely for their short and long-term financial goals. To achieve this, people must be inculcated with desirable financial attitude), financial knowledge, and financial behaviour (Hira, 2012). A person who is capable of managing and having a tighter grip on his/her finances, can be labelled as financially capable (Taylor, 2011). This discussion reflects upon the fact why building financial capability is noteworthy and why further in-depth studies are required to explore this

phenomenon. Moreover, studies also press for further research in this regard (Arifin, 2018; Çera, Khan, *et al.*, 2020; Xiao and O'Neill, 2018).

Financial literacy is considered to be a combination of knowledge, skill, and self-efficacy (Fernandes *et al.*, 2014; Warmath and Zimmerman, 2019). An individual's decision-making process is guided by his/her knowledge which allows a person to transform knowledge into his/her behaviour (Kempson *et al.*, 2013). As a result, financial capability can serve as the best measure against an individual's actual behaviour. On the other hand, culture stimulates behaviour (Mueller and Thomas, 2001) and people in different nations differ in their behaviours (Hanel *et al.*, 2018). Hence, culture may influence financial constructs which in turn influence financial satisfaction. This study focuses on the crucial role played by financial capability (prudent money management) in how it affects financial satisfaction (how happy an individual is with his/her financial situation). The argument reveals the role of culture and would be imperative to be compared based on culture. Therefore, the study seeks to investigate the direct impacts that financial constructs (see Figure 1) along with the indirect impacts of financial knowledge and financial attitude through financial capability have on financial satisfaction by looking at culture as a moderator which is not covered comprehensively in the existing literature as yet. Thus, the study provides an extended framework and addresses the existing gap in the literature through an integrated framework.

## 2 Literature review

### 2.1 Financial constructs and financial satisfaction

According to the capability theory (Sen, 1993), capabilities entail the freedom an individual has to live the type of life he/she wants and to gain adequate opportunities he/she needs. Financial capability refers to an individual's ability to act (knowledge and skills) and the opportunity to act (access to financial services), which grants the freedom to individuals to build financial well-being (Huang *et al.*, 2013; Johnson and Sherraden, 2007). Hence, financial capability is classified into two categories internal (i.e. financial literacy) and external (i.e. financial inclusion, which refers to access and availability of financial products) (Reyers, 2019). Therefore, internal capabilities and external facilities can add to one's ability to make better financial decisions and achieve financial behaviour which in turn can enhance financial well-being; e.g. regular money-saving steps and avoidance of additional expenses (Sherraden, 2013).

One could argue that satisfaction is a component of well-being (Netemeyer *et al.*, 2018). Financial satisfaction is concerned with an individual's ability to finance the desired life at any moment now and well into the future (Brüggen *et al.*, 2017). Hence, financial satisfaction is an individual's subjective assessment of the financial situation and it connotes individual characteristics such as personality, attitudes, knowledge, and skills (Joo & Grable, 2004; Woodyard & Robb, 2016). Prudent management of debt, income, and expenditures can reduce economic hardships and can increase satisfaction (Blom *et al.*, 2019). It has also been found that financial education relates positively to consumer satisfaction among individuals with higher education. Therefore, consumers who consider financial education important tend to feel more satisfied (Chen *et al.*, 2020). It has become obvious that financial education increases financial knowledge (Barua *et al.*, 2018). Financial knowledge and financial attitude are considered to be key determinants of financial satisfaction (Joo & Grable, 2004). For better planning and financial decision making, financial knowledge is quite essential (Lusardi, 2019). On the other hand, confidence that generates and contributes to satisfaction can be improved by adopting the right attitudes (Arifin, 2018).

Better debt planning in terms of cost and time depends on an individual's ability, knowledge and attitude (Lusardi and Tufano, 2015). Therefore, self-assessment of financial satisfaction may not reflect the true situation without first improving knowledge and attitude because available studies reflect that buyers usually do not have a better understanding of their level of financial knowledge (Robb & Woodyard, 2011). Hence, financial knowledge plays a crucial role in explaining financial satisfaction, and there is a positive association between them (Joo & Grable, 2004). A similar result is found for financial attitude as well (Yap *et al.*, 2018). To conclude, financial knowledge and financial attitude are related to financial satisfaction.

Additionally, financial knowledge relates to one's knowledge of economics and personal finance (Rothwell *et al.*, 2016). Having a sound financial knowledge positively influences financial capability which in turn ultimately contributes to financial satisfaction (Ali *et al.*, 2015). An individual's knowledge of financial systems is a necessary component of financial capability (Lusardi & Mitchell, 2014). It is argued that acquiring new knowledge may increase an individual's financial capability (Batty *et al.*, 2015). Financial knowledge is concerned with the internal capability of an individual which needs to be studied separately in order to identify the impact of financial knowledge on financial capability (Rothwell *et al.*, 2016). Studies indicate financial knowledge serves as the very base of financial capability development. In this context, financial capability has to do with the ability to use elementary financial knowledge along with the necessary financial behaviour to achieve financial satisfaction. It has been shown that financial capability has a strong impact on financial satisfaction (Xiao & Porto, 2017). This discussion witnesses the relationship between financial knowledge and financial satisfaction, and financial capability and financial satisfaction.

Studies have found that financial capability affects financial satisfaction (Ranta *et al.*, 2019; Xiao *et al.*, 2014; Xiao and O'Neill, 2018; Xiao and Porto, 2017). This result is due to the fact that enhancing financial capability leads to a reduction of debt burden, poverty and stress level (Taylor *et al.*, 2011). With the above in mind, improving financial capability may lead to better feelings towards well-being in general, and financial satisfaction, in particular. As a result, financial capability and financial satisfaction are positively associated.

Financial capability mediates the influences of both financial attitude and financial knowledge on financial satisfaction. A study claims that one of the factors required to broaden financial capability is financial knowledge as such (Nam *et al.*, 2019). Given this, sound decision-making processes stem from improved financial knowledge which entails financial satisfaction. This relationship highlights the mediator role of financial capability. By looking into financial capability as a mediator, one can conclude that financial capability acts as a strong mediator between financial education and financial satisfaction. Financial education carries many advantages since it improves financial well-being, e.g. knowledge, ability, and confidence to take action (Xiao & Porto, 2017). Consequently, financial education improves an individual's financial capability which in turn helps the individuals make better financial decisions and improve financial satisfaction. So, financial knowledge serves as the basis for financial capability, with financial capability resulting in financial satisfaction, thus, financial capability mediates the relationship between financial knowledge and financial satisfaction.

Attitude focusses on confidence which contributes to appropriate financial choices (French & McKillop, 2016). Financial attitude is an individual's way of approaching financial matters. It also relates to confidence to make suitable financial selections. It could be argued that an individual's financial attitude may boost the financial capability of people (Batty *et al.*, 2015; Shim *et al.*, 2013), and influence financial satisfaction as well (Falahati *et al.*, 2012). A person who makes sound financial decisions is labelled as being financially capable. Consequently, this leads to the direct effect of financial attitude on financial capability. On this basis, a relationship can be established with financial attitude influencing financial capability, and financial capability impacting financial satisfaction. This acts as a trigger to test the direct and indirect effects of financial attitude on financial satisfaction with financial capability playing the mediator role. The above discussion leads to the following hypotheses:

*H1: Financial satisfaction is positively influenced by financial knowledge.*

*H2: The effect of financial attitude on financial satisfaction is positive.*

*H3a: Financial satisfaction is positively impacted by financial capability.*

*H3b: Financial capability positively mediates the effect of financial knowledge on financial satisfaction.*

*H3c: The relationship between financial attitude and financial satisfaction is positively mediated by financial capability.*

An individual can improve the quality of financial decisions through financial advice, delegating the responsibility of making better financial decision onto financial advisors (Stolper and Walter, 2017). Recently, the influence of financial advice is receiving a significant share of attention (Von Gaudecker, 2015; Nguyen & Rozsa, 2019). financial advice influences an individual's overall financial satisfaction, since it relates to income and spending behaviour, to challenges in paying bills, and to other financial preparations for retirement and non-retirement goals (Schmeiser and Hogarth, 2013). financial advice can improve financial decision-making and can serve as a potential source of improving financial satisfaction (Kim *et al.*, 2018; Moreland, 2018). Individuals who received financial advice exhibited a higher score on financial satisfaction than those who did not (Xiao & Porto, 2017). Another study found that women prefer to request advice from family, friends, and relatives regarding retirement decisions as well as any significant financial decisions (Hsu, 2016). Hence, there is a positive relationship between financial advice and financial satisfaction. Evidence from literature encourages the present study to incorporate the discussed linkage into the conceptual model. Thus,

*H4: There is a positive impact of financial advice on financial satisfaction.*

Risk tolerance denotes the quantity of risk a person is ready to take to achieve her/his set goals (Hunter, 2002). From a financial perspective, risk tolerance is the quantum of risk an individual takes when making a financial decision (Roszkowski & Davey, 2010). Risk-aversion tendency and personal value attached to the goals affect the risk tolerance level of an individual (Hunter, 2002). Each goal has its level of risk along with the adequate amount of return and satisfaction. It has been argued that behaviours do influence an individual's financial well-being (Dew and Xiao, 2011). risk tolerance behaviour plays a positive role in estimating financial satisfaction, as individuals with high-risk tolerance behaviour were found to be far more satisfied with their financial condition (Aboagye and Jung, 2018; Jeong and Hanna, 2004). Moreover, there are also studies which have established a negative relationship between risk tolerance and financial satisfaction (i.e. Joo and Grable, 2004). Hence,

*H5: The influence of risk tolerance on financial satisfaction is positive.*

## **2.2 Moderating effects**

It has been shown that culture and personal experience affect learning (Hofstede *et al.*, 2010). According to Mueller and Thomas (2001), culture, being the fundamental system of values unique to a specific group or society, affects certain personality traits development and stimulates individuals to engage in different behaviours. So, culture involves not only a common interpretation of behaviours, but also real dissimilarities in behaviour (Smith *et al.*, 2002). In a wider context, culture is found to play a crucial role in explaining investment and income growth volatilities and level of corruption across countries (Anbarci *et al.*, 2011; Jha and Panda, 2017). It has also been found that national culture influences an individual's behaviours relating to savings, risk, time, etc. (Falk *et al.*, 2018), and mortgages as well (Guiso *et al.*, 2013). It is also known that culture affects stock prices by influencing dealers' trading actions (Eun *et al.*, 2015). This highlights the powerful role of culture in human behavioural patterns. Therefore, considering the differences in culture across nations (Diener and Diener, 2009), the present study seeks to investigate the moderating role of culture in the relationships between financial attitude and financial advice, and that of risk tolerance with financial satisfaction, respectively, by analysing three culture dimensions (Hofstede *et al.*, 2010): uncertainty avoidance; individualism and collectivism; and indulgence versus restraint. Uncertainty avoidance measures the extent of certainty preference of a culture, avoidance of risk, and preferred certainty over uncertainty. Individualism reflects the relationship between people and society. Along the same lines, individualism entails being more self-responsible and attaching more importance to one's self, whereas collectivism grants more importance to society. Lastly, indulgence refers to a type of society which allows itself to have leisure time, enjoy life and have fun without many restrictions and controls on social norms. On the other hand, restraint stands for a society that controls pleasure for needs through strict social norms and restrictions. As mentioned earlier, financial attitude impacts financial satisfaction (Falahati *et al.*, 2012) and attitude influences an individual's intentions (Bagwell *et al.*, 2014). Not only does culture affect personality traits and stimulates behaviour (Mueller and Thomas, 2001), it also plays a role in an individual's financial attitude

and financial satisfaction. Another study reveals that cultural attitudes to money are closely related (Henchoz *et al.*, 2019). In considering the dimensions of culture from Hofstede, individualism has an impact on an individual personality. An individual, who is more autonomous and isolates himself from the social group, has a different attitude from the other person who embraces collectivism. People who live in collectivistic societies prefer group goals rather than individual ones (Bandura, 1997). Hence, individualistic societies are expected to display a stronger relationship between financial attitude and financial satisfaction, compared to collectivistic societies.

Uncertainty avoidance implies exercising control over future events, certain actions and risk minimization (Hofstede *et al.*, 2010). Studies have found that socio-economic and demographic variables do influence risk tolerance (Jeong & Hanna, 2004). People in high uncertainty avoidance culture settings show a lower tolerance towards vagueness and multiplicity than those individuals who come from low uncertainty avoidance cultures. So, individuals from low uncertainty avoidance cultures are comparatively more comfortable with uncertainty and more easy-going about diversity (Hofstede, 2011). The influence of uncertainty avoidance on consumer behaviour has yielded mixed results in past studies (Lee *et al.*, 2007). There are also many circumstances in which future outcomes are ambiguously defined due to uncertain behaviour (Ganegoda & Evans, 2014). With regard to uncertainty, it could be argued that the difference in analyses exists and could be quite significant among individuals operating in different cultures (Ganegoda & Evans, 2014). It has been found that principles for life satisfaction judgments differ across cultures (Oishi *et al.*, 1999). Moreover, uncertainty negatively influences risk-taking (Kreiser *et al.*, 2010). Another study explained that risk tolerance is linked with culture, as countries with comparatively high uncertainty avoidance have relatively low-risk tolerance (Statman, 2010). Therefore, in order to understand the influence of culture on the effect of risk tolerance on financial satisfaction, uncertainty avoidance dimension should be considered.

Regarding the relationship between the cultural and individuals' levels, their comparison seems relevant since the literature on cross-cultural differences supports the present study intention. According to Leung (1989), in cross-cultural psychology, the individual-level approach dominates, but more attention must be given to culture-level research as this might lead to the advancements of theories. It is also imperative because cross-cultural psychologists want to understand more clearly the relationship between individual-level and group or collective-level analysis (Smith, 2002). Cultural differences analysis intended to add more clarity to the present study framework.

Financial advice is known to improve financial decision-making in communities (Moreland, 2018). Many families follow expert advice to make financial decisions (Stolper & Walter, 2017). Information-seeking behaviour is high when looking at social or cultural factors that affect people's behaviour (Nussbaumer *et al.*, 2009). Race and gender are significant cultural factors that tend to influence help-seeking behaviour (Finke *et al.*, 2011). National-level studies reveal the existence of associations between economic preferences and cultural variables, including language and religion (Falk *et al.*, 2018). This discussion leads to the indulgence versus restraint Hofstede's dimension. Indulgence refers to a society that allows freedom of basic and natural human wishes related to enjoyment and fun in life (being open to people and opinions), whereas restraint refers to a society which has controls in place and regulates matters through strict social norms and customs. Indulgence prone societies are more prevalent in Western Europe and restraint ones are more prevalent in Eastern Europe (Hofstede, 2011). Therefore, the current study seeks to investigate if indulgence societies have a stronger relationship between financial advice and financial satisfaction than restraint ones. Based on the above discussion, it can be hypothesized:

*H6a: The relationship between financial attitude and financial satisfaction is stronger in individualist than in collectivistic societies.*

*H6b: The linkage between risk tolerance and financial satisfaction is stronger for risk-takers than risk-averse.*

*H6c: The relationship between financial advice and financial satisfaction is stronger in indulgence than in restraint societies.*

It has been shown that financial capability is positively associated with financial satisfaction (Xiao *et al.*, 2014). It has also been found that people with higher incomes have higher financial capability (Atkinson *et al.*, 2007). Further to this, the income level effects financial solvency and financial satisfaction (Joo & Grable, 2004). Studies indicate that economic hardships (loss of income or income sufficiency) can influence individuals' well-being (Ranta *et al.*, 2019). Another study supports the argument of looking at different financial supports from the state, since they could be an income substitute that can influence their financial capability (Ranta and Salmela-Aro, 2018). Furthermore, a study found that financial satisfaction tended to be a stronger predictor of life satisfaction in low-income countries (Diener and Diener, 2009). Along the same lines, financial satisfaction can be accounted for by income levels (Vera-Toscano *et al.*, 2006). Given the above, this work assumes that the relationship between financial capability and financial satisfaction is stronger in societies which have higher income.

A strong correlation has been established between financial knowledge and financial satisfaction (Baek *et al.*, 2019). Financial literacy influences money management and an individual's financial planning which indirectly affects financial satisfaction (Ali *et al.*, 2015). This logic reflects the importance of better financial literacy in achieving financial satisfaction. Moreover, a study has demonstrated that financial education increases financial knowledge (Barua *et al.*, 2018). The level of financial literacy in countries with advanced financial markets is higher than that of developing ones (Klapper *et al.*, 2015). Financial literacy is inclusive of financial education, therefore higher financial literacy and better financial knowledge may result in sound decision-making processes and satisfaction levels. Therefore, a stronger relationship between financial knowledge and financial satisfaction exists thanks to higher financial literacy in countries with the developed financial market. The above discussion leads to the following hypotheses:

*H6d: The relationship between financial capability and financial satisfaction is stronger in higher-income societies.*

*H6e: The linkage between financial knowledge and financial satisfaction is stronger in societies with higher financially literate rate.*

Figure 1 illustrates the discussed linkages in a conceptual framework. Several studies have covered financial satisfaction and the discussed variables but not in an integrated. Therefore, another novelty of the present study is the comprehensive framework itself.

Please insert here Figure 1

**Figure 1.** Conceptual framework

### 3 Methodology

#### 3.1 Sample

The study was conducted in Spain and Poland for a number of reasons. Firstly, since the level of financial literacy is not the same in these countries (Klapper *et al.*, 2015), this research investigates whether or not the relationships between financial constructs and financial satisfaction show similar results. Secondly, one of the aims of this research is to establish the effects of culture on the linkages between financial constructs and financial satisfaction. This can be achieved by comparing two countries that do manifest different levels in culture dimensions, despite sharing EU membership and dominance of Roman Catholic believers. As already indicated, Spain and Poland exhibit differences in individualism and collectivism, uncertainty avoidance, and indulgence versus restraint (Hofstede *et al.*, 2010). Table 1 shows the scores of Poland and Spain in these dimensions. Thirdly, even though these two countries are part of the European Union, there are disparities in economic development since Spain has a higher per capita income than Poland. This is even supported by studies which show that both countries belong to two different clusters within Europe (i.e. Dilli *et al.*, 2018).

Please insert here Table 1

Initially, a questionnaire was designed and its content was reviewed by two academics. This type of data collection is popular among scholars since the unit of analysis are young adults (i.e. Friedline & West, 2016). This was modelled on a questionnaire by the National Financial Capability Study (NFCS) (FINRA, 2012). Subsequently, the questionnaire was translated into Spanish and Polish languages by professors from the respective countries. A pre-test was performed to obtain the consistency and accuracy of the translation. The data was collected during a 2-month period (June to July 2019). To gather enough respondents, the University Alumni database was used (the University of Warsaw in Poland, and the University of Huelva in Spain). They were asked to provide the contacts of a family member who recently had his/her birthday. These individuals were contacted to complete the questionnaire. Finally, a total of 402 valid records were analysed, hence meeting the requirement for the minimum sample size (Bagozzi and Yi, 2012). The final sample profile is shown in Table 2.

Please insert here Table 2

### 3.2 Variables

The financial constructs were measured by using statements in a response 5-point scale (1 = strongly disagree, 5 = strongly agree, see Table 3). Initially, financial satisfaction is measured by using the Chuan *et al.*'s (2012) scale. For the intents of measuring financial attitude, four items as applied in a previous expert report (Atkinson & Messy, 2011), were adopted. On the basis of previous papers (Robb & Woodyard, 2011; Woodyard & Robb, 2012), four items were used to measure financial knowledge. While, financial capability and financial advice were measured by adopting four items for each from NFCS (FINRA, 2012). Lastly, risk tolerance is measured by four items from Joo and Grable's (2004) scale.

### 3.3 Data analysis

The Common Method Variance (CMV) presents a concern when obtaining data through a questionnaire (Chang *et al.*, 2010). Harman's single factor test and a series of pre-tests targeting the clarity of the measurement items were employed to examine whether the CMV is an issue in the research or not. According to the principal axis factoring, the first factor accounts for 36.81% of the total variance, which is below the threshold of 50% (Podsakoff *et al.*, 2003). So, by way of a preliminary conclusion, CMV is not a weighty issue in the current study.

To investigate direct, indirect and interactive effects on financial satisfaction, partial least squares method of structural equation modelling (PLS-SEM) was employed (Hair *et al.*, 2017). PLS-SEM was used because this research requires latent variable scores to follow-up analysis (Hair *et al.*, 2019). This technique of analysis is used by scholars to examine relationships between financial constructs (i.e. Castro-González *et al.*, 2020; Gerrans *et al.*, 2014; Weisfeld-Spolter *et al.*, 2018). The measured constructs were the results of reflective indicators. PLS-SEM was executed in SmartPLS 3.0 (Ringle *et al.*, 2015). As it is recommended, bootstrap procedure with 5000 iterations of resampling was used to assess the standardized paths between measured constructs (Hair *et al.*, 2017).

## 4 Results

A preliminary analysis was done before testing the hypotheses. Attention was paid to meet the PLS-SEM assumptions which consist of collinearity, item loading, scale reliability, and discriminant validity among constructs. All item loadings were above the threshold of 0.70 (see Table 3) and there was no multicollinearity observed. It was found that all constructs had reasonable scale reliability since the Cronbach's alpha and composite reliability values ranged from 0.70 to 0.95. Furthermore, measured constructs reflected sufficient convergent validity as they explained at least half of their items' variance



examined through average variance extracted values. Additionally, the measured constructs were distinct from one another since discriminant analysis revealed that all the Heterotrait-Monotrait coefficients were smaller than 0.85 (Henseler *et al.*, 2015). Moreover, the average correlation between financial satisfaction and other constructs were above 0.60, indicating the linear relationships between them, thus supporting the use of PLS-SEM. As a result, based on Hair *et al.*'s (2019) principals, all PLS-SEM assumptions were satisfied.

Please insert here Table 3

The results of the structural model are reported in Table 4. The model explains 60.9% of the variation in financial satisfaction. No violation of collinearity assumption was observed (Hair *et al.*, 2019). Regarding the direct effects, with the exclusion of risk tolerance ( $\beta = 0.086, p > 0.10$ ), all financial constructs positively and statistically impacted financial satisfaction. Hence, the strongest effect among these significant financial constructs was derived from financial capability,  $\beta = 0.257, p < 0.001$ , while the weakest one was from financial knowledge,  $\beta = 0.122, p < 0.05$ . In between of the latter bounds were financial attitude ( $\beta = 0.193, p < 0.001$ ) and financial advice ( $\beta = 0.230, p < 0.001$ ). Therefore, the data supported H1, H2, H3a, and H4, whereas H5 was rejected.

Concerning the indirect influences, it was found that financial capability statistically mediates the effects of financial attitude ( $\beta = 0.075, p < 0.001$ ) and financial knowledge ( $\beta = 0.056, p < 0.01$ ) on financial satisfaction. Thus, substantial evidence was found in supporting H3b and H3c. These results emphasise the role of financial capability in governing these influences on financial satisfaction.

Please insert here Table 4

With regard to the effect of culture, only two interactive effects were significant: cases of financial attitude ( $\beta = 0.121, p < 0.05$ ) and risk tolerance ( $\beta = -0.111, p < 0.05$ ). Hence, based on the data, the relationship between financial attitude and financial satisfaction is stronger among Polish young adults as compared to Spanish counterparts (see Figure 2, left). Thus, H6a was supported. On the other hand, interesting outcomes are recorded regarding the relationship between risk tolerance and financial satisfaction since it was moderated by culture. Hence, as illustrated in Figure 2 (right), the relationship was positive among Spanish individuals, and negative among Poles, since Poles are more risk-averse individuals: the more the level of risk increases, the more satisfaction decreases. Receiving opposite slopes of the above relationship in the two countries could be the reason why the direct effect of risk tolerance on financial satisfaction was insignificant (see Table 4). Therefore, H6b was not rejected. These findings are illustrated in Figure 2.

Please insert here Figure 2

**Figure 2.** Interaction effects (FA, financial attitude; RT, risk tolerance)

## 5 Discussion

The findings revolve around three types of effects (direct, indirect and interactive) on financial satisfaction as discussed below. Firstly, regarding the direct influences, this research confirms that, with the exclusion of risk tolerance, all financial constructs are important determinants in achieving financial satisfaction. Hence, this paper provides substantial evidence for governments, public-policies advocates, education institutions and the financial industry to design strategies/policies to improve individuals' financial literacy,

since a higher level of financial literacy leads to higher financial satisfaction. Moreover, this study shows that adequate levels in financial attitude, knowledge, capability, and advice are vital to acquiring financial satisfaction. These findings are in line with previous studies (Arifin, 2018; Joo & Grable, 2004; Xiao & O'Neill, 2018). The insignificant risk tolerance–financial satisfaction relationship could be a result of culture effect. In this context, some scholars have found a positive association (i.e. Woodyard & Robb, 2016) and a few others have found a negative one (i.e. Joo & Grable, 2004).

Secondly, with respect to the indirect effects, findings confirm the mediating role of financial capability in the effects of financial attitude and financial knowledge on financial satisfaction. Based on the literature review, the authors believe that this is among the first ever attempts to investigate the financial attitude and financial knowledge impacts on financial satisfaction through financial capability. Therefore, financial capability does govern these relationships, meaning that it has a vital role in explaining an individual's financial satisfaction. Hence, becoming financially satisfied is a matter of a combined direct and indirect effects of financial attitude and financial knowledge on financial satisfaction. This finding is consistent with prior studies, since it highlights the key role of financial capability in an individual's financial satisfaction (Xiao *et al.*, 2014; Xiao & O'Neill, 2018).

Thirdly, this paper offers useful insights into the effect of culture on the relationships between financial constructs and financial satisfaction. The data showed that culture is an important factor to be considered since it moderates the effects of financial attitude and risk tolerance on financial satisfaction. The relationship between financial attitude and financial satisfaction is stronger among Poles as compared to Spanish individuals. According to Hofstede's (Hofstede *et al.*, 2010) culture, Poland is an individualistic society, while Spain is a collectivistic one (in the European context) (see Table 1). The Poles are expected to look after themselves and immediate family much more than Spanish do. This indicates that individual achievements are more appreciated in countries like Poland, supporting the idea that an increase in an individual's financial attitude results in higher financial satisfaction for Poles than in Spanish individuals. On the other hand, according to uncertainty avoidance (see Table 1), Poland reflects a very high preference for risk avoidance, hence being risk-averse. This can justify why our results reveal a negative association between risk tolerance and financial satisfaction in the case of Poland. However, evidence showed a positive risk tolerance–financial satisfaction relationship for the Spain sample, indicating that the more the risk increases, the higher the individuals' financial satisfaction. Indeed, Spain exhibits a lower level of uncertainty avoidance when compared to Poland (see Table 1). In addition, a t-test was run to investigate the differences in each indicator of risk tolerance between the two countries (See Table 5). Results show that Spanish individuals scored higher in those indicators as compared to Poles ( $t > 7.85, p < 0.001$ ). This finding goes in line with Statman's (2010) claim that risk tolerance is relatively low in countries with high uncertainty avoidance. All things considered, evidence was found in support of the role of culture in the influences of financial attitude and risk tolerance on financial satisfaction.

Please insert here Table 5

The impact of culture was insignificant in the influence of financial advice on financial satisfaction, because both countries are not indulgent societies (Hofstede *et al.*, 2010). The moderating roles of income and financial literacy in the effects of financial capability and financial knowledge on financial satisfaction were insignificant. In the financial knowledge–financial satisfaction relationship case, the insignificance might be due to a similar level of financial literacy (Klapper *et al.*, 2015) and adult literacy rate (OECD, 2015) in Spain and Poland. The insignificant moderation of the financial capability–financial satisfaction relationship is congruent with the previous studies which indicate that income level does not affect financial capability as well as financial satisfaction (Hasler & Lusardi, 2019). These areas present a scope for further research to explore the real reasons behind these results.

## 6 Conclusion

The present study has useful implications. In light of Sen's (1993) capability theory, this research provides additional insights into explaining individuals' financial satisfaction through financial constructs. Our analysis showed that individuals' financial satisfaction can be achieved by increasing their level of financial literacy, inclusion, and advice. In this regard, our results complement the existing research by introducing the mediating effect of financial capability in the influences of financial knowledge and financial attitude on financial satisfaction, and the role of culture in moderating the impacts of financial constructs on financial satisfaction. This leads to the following additional contributions. Firstly, this paper explores the mediation role of financial capability on the influences of financial knowledge and financial attitude on financial satisfaction. Previous research has focused mainly on direct relationships between financial constructs and financial satisfaction. While, this paper offers a more comprehensive model for investigating the effects of financial constructs and financial satisfaction by emphasising the key role of financial capability in making individuals financially satisfied.

Secondly, our findings show that culture does matter when it comes to financial satisfaction and its relationship with financial attitude and risk tolerance. It was demonstrated that Hofstede's culture dimensions have the capacity to explain the differences between countries in the effects of financial constructs on financial satisfaction. Hence, individualistic societies manifest a stronger relationship between financial attitude and financial satisfaction, as compared to collectivistic ones. Moreover, this study contributes to the existing research by clarifying why the relationship between risk tolerance and financial satisfaction reflects the opposite direction among scholars (i.e. Joo & Grable, 2004; Woodyard & Robb, 2016). Therefore, countries scoring high in Hofstede's uncertainty avoidance, are expected to manifest negative association between risk tolerance and financial satisfaction, while those scoring not as high are likely to reflect a positive one.

This research is compromised from its share of limitations. Firstly, the data was collected from two European countries which present different levels in Hofstede's culture, thus limiting the generalisations that can be made for other countries. Secondly, cultural values are not static but they may change over time. Future research is encouraged to elaborate a more appropriate culture scale and to examine the influence of other culture dimensions (e.g., Hall's or GLOBE's culture dimensions) on one's behaviour. Thirdly, self-evaluation was used to measure individuals' perceptions of financial constructs leading to social comparison bias.

## Conflict of interest

Neither author had any conflicts of interest associated with the research for this paper.

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**Table 1.** Hofstede's dimensions

Dimensions	Spain	Poland
Individualism	51 (collectivist)	60 (individualist)
Uncertainty avoidance	86 (risk-taker)	93 (risk-averse)
Indulgence Versus Restraint	44 (not restraint)	29 (restraint)

**Table 2.** Sample profile

Variable		Spain ( <i>n</i> = 200)	Poland ( <i>n</i> = 202)	Total ( <i>n</i> = 402)
Age	mean (standard deviation)	26.8(7.31)	28.6(6.75)	27.7(7.08)
Gender	Female	57.5%	70.3%	63.9%
	Male	42.5%	29.7%	36.1%
Income	Up to 900 EUR (2000 PLN)	27.0%	28.2%	27.6%
	900–1500 EUR (2000–4000 PLN)	51.5%	24.8%	38.1%
	1500–2000 EUR (4000–7500 PLN)	17.0%	36.1%	26.6%
	Above 2000 EUR (7500 PLN)	4.5%	10.9%	7.7%
Region	North	18.0%	32.7%	25.4%
	Central	21.5%	15.5%	18.4%
	Capital city	10.0%	9.9%	9.9%
	South	20.0%	24.3%	22.2%
	East	19.5%	5.9%	12.7%
	West	11.0%	11.9%	11.4%

**Table 3.** Measurement model

Items per each construct	Loading
Financial satisfaction	
<i>I am satisfied with my current saved money</i>	0.806
...preparedness to meet emergencies	0.852
...financial situation	0.822
...financial convenience and financial health	0.776
...financial management skills	0.830
In the last months, I have been able to save money as much as I have wished	0.740
Financial attitude	
It is important to set goals for the future	0.790
I pay my bills on time	0.756
I keep a close personal watch on my financial affairs	0.850
I am prepared to risk some of my own money when saving or making an investment	0.725
Financial knowledge	
Investing in different assets reduce risk	0.794
An investment with a high return is likely to be high risky	0.715
High inflation means that the cost of living is increasing rapidly	0.827
If price goes up rapidly, the money people have in saving accounts could lose much of its value	0.804
Financial capability	
I can arrange at least 1000 EUR if an unexpected needs arose within the next month	0.763

I have enough funds to survive for three months without regular earnings	0.745
I often use electronic payment mode for paying bills through (credit card, debit card, online banking, mobile banking etc.)	0.798
I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards and tracking expenses	0.728
Financial advice	
I think financial advice is helpful	0.738
I consider others opinions in decision making (buying, investing, savings, borrowings, etc.)	0.795
Consultation is important in dealing with financial issues	0.762
I think financial advice will help me to achieve financial expectations in better way than alone decision	0.771
I would trust financial professionals and accept what they recommend	0.707
Risk tolerance	
In terms of investing, safety is more important than returns	0.786
When I think of the word “risk” the term “loss” comes to mind immediately	0.765
Making money from risky investment is based on luck	0.791
Investing is too difficult to understand	0.789

**Table 4.** *Hypotheses testing*

Effect	Path	$\beta$	$t$	$p$	Hypothesis	Conclusion
Direct	FK $\rightarrow$ FC	0.217	3.724	0.000		
	FA $\rightarrow$ FC	0.290	5.024	0.000		
	FA $\rightarrow$ FS	0.193	3.628	0.000	H1	Supported
	FK $\rightarrow$ FS	0.122	2.351	0.019	H2	Supported
	FC $\rightarrow$ FS	0.257	6.049	0.000	H3a	Supported
	FAD $\rightarrow$ FS	0.230	4.454	0.000	H4	Supported
	RT $\rightarrow$ FS	0.086	1.641	0.101	H5	Rejected
	country $\rightarrow$ FS	-0.050	1.109	0.267		
Indirect	FA $\rightarrow$ FC $\rightarrow$ FS	0.075	3.771	0.000	H3b	Supported
	FK $\rightarrow$ FC $\rightarrow$ FS	0.056	3.250	0.001	H3c	Supported
Interactive	FA*culture $\rightarrow$ FS	0.121	2.342	0.019	H6a	Supported
	RT*culture $\rightarrow$ FS	-0.111	2.085	0.037	H6b	Supported
	FAD*culture $\rightarrow$ FS	-0.006	0.121	0.903	H6c	Rejected
	FC*country $\rightarrow$ FS	-0.073	1.715	0.086	H6d	Rejected
	FK*country $\rightarrow$ FS	-0.071	1.398	0.162	H6e	Rejected

*Note:* Dependent variable, financial satisfaction (FS); other variables: financial knowledge, FK; financial attitude, FA; financial capability, FC; financial advice, FAD.

**Table 5.** *Results of t-test for the risk tolerance's indicators*

Indicator	Mean		$t(400)$	$p$
	Spain	Poland		
Risk tolerance 1	3.738	2.750	11.906	0.000
Risk tolerance 2	3.604	2.865	8.015	0.000
Risk tolerance 3	3.579	2.825	7.853	0.000
Risk tolerance 4	3.936	2.825	11.468	0.000