



# Associations between risk preference and abroad experiences

Svenja Leonhardt

Dissertation written under the supervision of Prof. Cristina Soares Pacheco  
Mendonça

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## Abstract

**Title:** Associations between risk preference and abroad experiences

**Author:** Svenja Leonhardt

Risk preferences have been a research topic since utility theory enriched the economic thinking. Various findings show a significant influence of factors like gender or age, as well as certain life events like childbirth, on the level of risk preference, ranging from risk averse to risk seeking. However, no research on the influence of an international experience has been conducted to date. Abroad experiences have proven to impact certain personal development and abilities, such as creativity and employability skills. Thus, this thesis aims to determine if a lower risk aversion, and hence higher risk seeking tendencies, are related to work or educational experiences abroad. A survey-based approach with three types of risk preference measurements was conducted for two groups, one with and one without an abroad experience. Risk-taking behavior was measured using a gamble over lifetime income, a lottery gamble, and a general risk propensity scale (GRiPS). The main results support the idea that an abroad experience does affect risk preferences, indicating that participants with an abroad experience were more risk seeking than participants without an abroad experience, but only when risk preferences were measured using a general risk propensity scale. Evidence suggests this relationship may be causal.

**Keywords:** Risk preference, risk seeking, risk taking, abroad experience, international experience

## Sumário

**Título:** Associações entre preferências de risco e experiências no estrangeiro

**Autor:** Svenja Leonhardt

As preferências de risco têm sido um tema de investigação desde que a teoria da utilidade enriqueceu o pensamento económico. Vários resultados mostram uma influência significativa de factores como o sexo ou a idade, bem como certos eventos da vida como o nascimento de um filho, no nível de preferências de risco, que vão desde a aversão até à procura de risco. No entanto, não foi realizada qualquer investigação sobre a influência de uma experiência internacional. As experiências no estrangeiro têm provado ter impacto em certas capacidades e no desenvolvimento pessoal, tais como criatividade e capacidades de empregabilidade. Assim, esta tese visa determinar se uma menor aversão ao risco e, conseqüentemente, maiores tendências de procura de risco estão relacionadas com experiências de trabalho ou de educação no estrangeiro. Foi realizado um questionário com três tipos de medidas de preferência de risco para dois grupos, um com e outro sem uma experiência no estrangeiro. O comportamento de risco foi medido utilizando uma aposta de rendimento ao longo da vida, um jogo de lotaria e uma escala geral de propensão ao risco (GRiPS). Os principais resultados apoiam a ideia de que uma experiência no estrangeiro afecta as preferências de risco, indicando que os participantes com uma experiência no estrangeiro procuram mais riscos do que os participantes sem uma experiência no estrangeiro, mas apenas quando as preferências de risco são medidas utilizando uma escala geral de propensão de risco. As provas sugerem que esta relação pode ser causal.

**Palavras-chave:** Preferência de risco, procura de risco, tomada de risco, experiência no estrangeiro, experiência internacional

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## Introduction

” I am happy to see that people benefiting from Erasmus+ opportunities feel more ready to take on new challenges, have better career prospects, and are more aware of the benefits the EU brings to their daily lives ”- Themis Christophidou, Director-General for Education, Youth, Sport and Culture of European Commission (European Commission & Directorate-General for Education, 2021).

Our world and economy are characterized by the impact of globalization. With the implementation of the Bologna Process, a common educational system of Bachelor’s and Master’s degree in the European Union, and the EU’s free flow of people policy, international degree paths are institutionally supported (European Higher Education Area, 2018). Erasmus+, the European program to support abroad experiences, is one of the many programs that encourage young adults to live abroad. The advantages of an abroad experience are various, and the job market is increasingly asking for it: The European Commission states that students with, in comparison to students without, an Erasmus experience show 23% lower unemployment rate five years after graduation (European Commission et al., 2017). But people with an abroad experience do not only have benefits like better career options, according to Themis Christophidou’s statement, they may also be more willing to take on challenges, in other words, they may be more risk seeking.

Erasmus+ evaluations show that an educational or work experience abroad enriches one’s personal development in important personal factors like transversal skills, cross-cultural skills and tolerance of ambiguity, curiosity, vigor, and a global mindset (European Commission et al., 2017). However, so far, the literature has not investigated the relationship between abroad experiences and risk. The step to leave the home-base to study or work in a foreign country with a language not similar to one’s own is a step into uncertainty. When one is deciding to live abroad for a time, it means to leave the comfort zone and challenge oneself. This thesis’ question is, then, if the ones deciding to live abroad are in general more risk seeking.

## Problem Statement

Is there a relation between having an abroad experience and risk preference? As going abroad involves putting oneself into an unknown environment where exposure to a new language and culture is highly probable, living abroad suggests a risk seeking behavior. The question this dissertation aims to investigate is whether an abroad experience and risk preference are related and if so, how the abroad experience influences the level of risk preference. The main research question is therefore 'Is a lower risk aversion and thus higher risk seeking related to a work or educational experience abroad?' In detail, the research questions this dissertation addresses are:

RQ1: Having an abroad experience leads to higher risk seeking.

RQ2: The higher risk seeking behavior of people who have been abroad is not due to risk seeking people being more willing to live abroad.

## Relevance

Risk and its influence in decision making is an important topic of research that has been the target of much attention. The importance of risk in decision making goes back to utility theory by Bernoulli, (1954) and prospect theory of Kahneman and Tversky (1979) and is recently mostly focused on the impact of differences between self and perception of others' risk preferences in decision making (Polman & Wu, 2020). Risk preferences can be relevant in many ways in business contexts, for example, companies prefer less risk averse CEOs as a lower level of risk aversion benefits the incentive pay and thus the performance of the company (Graham et al., 2013).

Research has revealed certain factors that influence individual risk preferences, such as age (Dohmen et al., 2010; Cohen Liran Einav et al., 2005) or gender (Croson & Gneezy, 2009). Another potential factor, which has yet to be investigated, is abroad experiences. When deciding to go abroad, risk may play an important factor in the process of decision making. There has been research on abroad experiences and its effects on various intrapersonal and interpersonal outcomes like for instance creativity (Fee & Gray, 2012; Maddux et al., 2010; Maddux & Galinsky, 2009), behavior (Petersdotter et al., 2017) and cultural competences (Kokko, 2011). However, the association between risk seeking behavior and an abroad experience has not been researched. As the demand for abroad experiences is continuously growing in the job market (European Commission et al., 2017) and given the importance of



risk preference impact not only on life, but also economic decisions (Rieger et al., 2015), this study provides research about the relationship between these two factors.

## Structure

The current dissertation first reviews previous studies on abroad experiences and their influence on personal behavior traits, as well as literature on risk preference, its measurements and related research. It is followed by the explanation of the study's research methodology via a survey with two groups, one with abroad experience and one without, and measures of risk aversion and general risk propensity. The outcome of the experiment is then analyzed and discussed, managerial implications explained, and limitations and future scopes deliberated.

## Literature Review

### *Risk and decision making*

According to economic theory, humans always decide for an option with the highest utility for them. In accordance with expected utility theory by Bernoulli (1954), people typically focus on their own perceived individual utility, always choosing the highest utility possible and thus lower risk. According to Bernoulli (1954), the utility decreases with wealth, indicating that wealthier people are less likely to participate in risky gambles. For instance, a person with a fortune of 5.000€ values a prize of 1.000.000€ differently than a person with a fortune of 5.000.000€. When deciding under uncertainty, the outcome is weighted by its probability. For example, considering two possible outcomes, the expected utility (EU) for deciding is  $EU = P_A * A + P_B * B$ , with  $P$  being the probability of each outcome and  $A$  and  $B$  the utility obtained due to each outcome (Schmeidler & Wakker, 1990). For example, when faced with a gamble of the following two options:

**Option 1:** 20% chances of winning ( $P_A$ ) 400€ ( $A$ ) and 80% chances of winning ( $P_B$ ) 0€ ( $B$ ).  $EU = 0.2 * 400€ + 0.8 * 0€ = 80€$

**Option 2:** 25% chances of winning ( $P_A$ ) 300€ ( $A$ ) and 75% chances of winning ( $P_B$ ) 0€ ( $B$ ).  $EU = 0.25 * 300 + 0.75 * 0 = 75€$

One will choose Option 1, as the expected outcome is higher than Option 2. However, the choice made is based on how people perceive utility. For instance, if one values  $A$  and  $B$  in the example given as the root square of the number given, the expected utility for Option 1

is 1.27€, whereas for Option 2 it is 1.37€, resulting in the individual choosing Option 2 (Schmeidler & Wakker, 1990).

This theory has since been replaced by Tversky and Kahneman's (1992) prospect theory. Prospect theory, in contrast, includes reference points of the individual and states that people tend to be more risk averse in the domain of gains and more risk seeking in the domain of losses. It indicates that gains and losses are valued differently and thus individuals base decision making on gains rather than on losses. Ever since it was developed, prospect theory became the most used theory in economics to explain how people, in general, react to risky situations. This thesis, though, focuses on individual-level variation in risk preferences and the factors that explain this variation.

### *Individual risk preference*

When it comes to risk, there are two important tendencies towards it: risk seeking and risk aversion. Based on work from Fox and collaborators (2015), risk aversion is defined as the tendency to choose an option seen as less risky over an option seen as riskier, whereas risk seeking is the opposite (meaning to choose a riskier option instead of a certain or risky option). The measurement of those tendencies towards risk is often done in a single scale, usually resulting in a classification of people as either risk averse, risk neutral or risk seeking. To simplify the reading experience, the current dissertation will refer to these general tendencies as risk preference.

Risk preference and its measurement has been a topic of research over the years, shifting from group-level risk preference, for instance in general demand for risky assets in comparison to safe assets (Friend & Blume, 1977), to the measurement of individual risk aversion. Binswanger (1981) was one of the first to measure individual risk aversion in rural areas and concluded that there was no difference in measured risk aversion between wealthy and poor individuals. Rieger and collaborators (2015), however, later found that participants in countries with a higher gross domestic product per capita are more risk averse in gains but have the tendency to be more risk seeking in losses when they conducted a cross-country survey across 53 countries.

Since it started being treated as an object of research, individual risk aversion has been researched in relation to various topics and often displaying contradictory findings. For example, research has tried to relate risk preference with demographic variables. Shaw (1996) showed that risk taking behavior is positively correlated with wage growth, as well as higher

education. Other research however states the opposite, that is, that higher education negatively affects risk preference (Outreville, 2015). The same ambiguity of results also goes for age (Decker & Schmitz, 2016). While some find age to be negatively related to risk seeking (Dohmen et al., 2010), Cohen and Liran (2005) suggest a U-shape pattern of risk aversion over the lifecycle. Gender however is consistent over research, showing a tendency of women being more risk averse than men (Charness & Gneezy, 2012; Croson & Gneezy, 2009). Research in this area has also looked at how individual psychological characteristics are related to risk preference. The findings are consistent for the relation of cognitive ability and risk preference: Dohmen and collaborators (2010) showed that individuals with a higher cognitive ability were more likely to take risks and Lilleholt (2019) found that there is a (weak but significant) negative relationship between cognitive ability and risk aversion. The effect of risk preference on behavior has been topic of research as well. For instance, Barsky and collaborators (1997) found a relationship between the level of risk aversion and risk behaviors, namely a more risk tolerant person is more likely to engage in risky behavior like smoking and drinking. Graham and collaborators (2013) later found that CEOs are significantly less risk-averse than the general population and that these CEOs are likely to be working in companies with a high growth rate.

Measuring risk preference can be traced back to two main streams: One based on behavioral paradigms and one on self-reported states (Mata et al., 2018). The behavioral stream is mostly used to analyze the cognitive correlates of risk preference and is measured with decision elicitation tasks or gambles like lotteries (Mata et al., 2018). Tasks can be for example, choosing a payoff out of a panel with different probabilities or a gamble. The self-reported states stream goes back to questions concerning risk, in which, for example, participants state in what extent they agree with a statement. This can be a general question like “How willing are you to take risks, in general?” (Dohmen et al., 2011) or a statement of willingness towards risky events like “Driving a car without wearing a seatbelt” (Blais & Weber, 2006). Self-reported statements are often used for the assessment of the genetic basis of risk preference (Beauchamp et al., 2017), and in panel assessments of societies, such as the German Socio-Economic Panel (SOEP) (Richter & Schupp, 2015). There is a long tradition of using lottery and gamble to measure risk preferences (Kahneman & Tversky, 1979), though self-reported states have been proved to show significant validity of economic and health outcomes (Mata et al., 2018). Both measurement streams have been used to show significant findings in research and will be used in the dissertation.

*Self-reported measurement: General risk propensity*

Risk perception and risk propensity are two different aspects of risk preference (Weber, 2010), meaning a person could engage in a riskier event than another person with a similar risk propensity due to differences in the perceived risk of the event. The general risk propensity, the natural disposition of a character towards risk, will be measured using the GRiPS scale (Zhang et al., 2019).

When measuring risk attitudes, the natural disposition towards risk is often measured using risk behavior or self-reported states (Mata et al., 2018). One of these measurements is the Domain-Specific Risk-Taking scale for adult population (DOSPERT) (Blais & Weber, 2006). Although the DOSPERT scale has often been used to assess a general risk preference (Zhang et al., 2019), the measure was developed to assess risk over the domains of financial decisions, health / safety, recreational, ethical and social decisions. The scale consists of two parts: in the first part participants are asked to state their likelihood to participate in risky activities for the specific domains like for instance, “forging somebody’s signature”, followed by the second part, in which participants evaluate the extent of benefits and risks of their previous judged activities (Blais & Weber, 2006). The degree of risk-taking is highly domain-specific and a general difference between male and female respondents could be found, indicating that women are more risk averse in all domains except social risk (Blais & Weber, 2006). As the DOSPERT is a scale developed to measure risks over specific domains and has significant differences in the risk preference over the domains, it is often criticized when used for the measurement of general risk propensity (Zhang et al., 2019; Brailovskaia et al., 2018).

Another measurement often used for assessing risk propensity is the self-reported one-item Dohmen measure of general risk (Dohmen et al., 2011). This question is a general question of how willing respondents are to take risks “in general” and shown to be predicting an all-around risk behavior. A scale that is often used in psychology to measure general risk propensity (Mata et al., 2018), is the German Socio-Economic Panel (SOEP) (Richter & Schupp, 2015). It contains a variety to measure risk attitudes like the self-reported measurements including the general risk willingness as in Dohmen’s measure.

Even though Dohmen’s questions is a measurement of general risk propensity, indicating the personality of an individual and its tendency towards risk, single item measures are discouraged for psychological constructs (Wanous & Hudy, 2001). Zhang and collaborators (2019) enhance the knowledge about risk by creating a scale that aims to measure a general personal disposition towards risk. The so-called ‘General Risk Propensity Scale’ (GRiPS) was developed across five samples. The scale was associated with the

Domain-Specific Risk-Taking scale for adult population (DOSPERT) (Blais & Weber, 2006) and Big Five (Zuckerman et al., 1993), indicating how risk propensity predict variances in work, life and academic outcomes. One example is that risk takers experience more stress than people who are more risk averse.

Thus, the research questions can be further developed to the following hypothesis:

H1: There is a positive relationship between an abroad experience and a higher general risk propensity.

#### *Behavioral measurement: Lotteries and gambles*

As stated before, lottery gambles are one type of measurement of the behavioral stream that has often been used to measure risk preference. When developing prospect theory, Kahneman and Tversky (1979) used a lottery gamble to measure risk preferences. Although the measurement is often subject to a description-experience gap, meaning that in a gamble one might choose differently than when experiencing the same situation in real life (Hertwig & Erev, 2009), it is still one of the most common behavioral measurements used for risk preference (Holt & Laury, 2002; Mata et al., 2018). Sabater-Grande and Georgantzis (2002) use the lottery panel for measuring risk preferences to study the effect of risk preferences on a prisoner's dilemma game. According to the choices made, respondents are classified into risk averse, risk neutral and risk seeking. The lottery panel is based on research from Keith Murnighan and collaborators (1988), who study the effect of risk aversion in bargaining, and Millner and Pratt (1991), studying the relation between risk aversion and rent-seeking.

Another measurement of the behavioral stream is gambling questions. A method used to assess risk preferences in the health and retirement area by Barsky and collaborators (1997) is the income over lifetime gamble, in which participants are asked to choose between two jobs, with one option displaying a safe income stream and one with a riskier chance of increasing the income for life. Based on the choice made, respondents are classified into four groups, ranked by the level of risk aversion. Graham and collaborators (2013) later use the approach of gamble over lifetime income with the adjustment of indication the need to choose

a new job, to prevent status quo bias. The answers of respondents are again used to classify the most risk averse group and Graham and collaborators (2013) used it to study the influence of risk aversion on managerial attitudes and corporate actions.

As behavioral measurements of risk, and especially lottery, are a traditional way of measuring risk preferences, the lottery game according to Sabater-Grande and Georgantzis (2002) will be used in the dissertation. To prevent numeracy problems with the lottery game (Ehrenberg, 1981), the income over lifetime gamble according to Graham and collaborators (2013) will also be included. Thus, the following hypotheses of this dissertation can be advanced:

H2: There is a positive relationship between an abroad experience and risk behavior in an income over lifetime gamble.

H3: There is a positive relationship between an abroad experience and risk behavior in a lottery gamble.

#### *Culture's impact on risk preferences*

Risk behavior can also be influenced by cultural factors; (Shiller et al., 1992) were the first to differentiate individual risk aversion between different cultures when they found that Russians and West Germans respondents were more risk averse than those from the United States in concerns of risk in the job market.

Uncertainty avoidance - a dimension of Hofstede's model of cultural dimensions (Hofstede, 2001) – is the level to which a country responds towards uncertainty. A country with a high uncertainty avoidance usually prefers structure and safety, whereas one with a low level of uncertainty avoidance is more tolerant towards uncertainty. However, Hofstede, (2001) states that uncertainty avoidance does not always results in risk avoidance. As stated by Rieger and collaborators (2015), there are international differences in risk preferences resulting through a relation between one of Hofstede's cultural factors (uncertainty avoidance) and risk attitudes in countries: Countries in which the level of uncertainty avoidance is higher, tend to be more risk averse in gains and more risk seeking in losses. However, prospect theory does not notice any significant changes due to cultural factors (Rieger et al., 2015).

Although risk preference is thought to be stable (Schildberg-Hörisch, 2018), evidence shows that certain life events change it, like for instance childbirth (Görlitz & Tamm, 2020). The current dissertation proposes that spending time abroad with other cultures is an example of such type of life events that can change risk preference. Thus, it aims to collect evidence about whether an abroad experience might have an impact on risk preferences. To do so, it proposes to demonstrate that the difference in risk preference between people who have and have not been abroad is not due to a selection effect, in which people who go abroad are more risk seeking because risk seeking people are more willing to go abroad in the first place. Thus, the following and final hypothesis is proposed:

H4: For those who have never been abroad, there is no relationship between risk preference and the willingness to live abroad.

### *Abroad experiences*

The world today is characterized by the impact of globalization. Thanks to technological advances that changed for instance sending costly telegrams or letters to receive information anywhere anytime over the internet, connecting to other people is no longer regional limited, thus making it easy to speak with someone on the other side of the world (Maddux et al., 2021). Not only is it easier to exchange information across the world, but there is also trend towards a global culture (Bird & Stevens, 2003). The world is becoming “flatter” every year (Friedman & Mosley, 2006). Ongoing global challenges like climate change and pandemics show the importance of interconnection between individuals throughout the world (Maddux et al., 2021). In Europe, living abroad is even easier to administer thanks to the free flow of people policy. When crossing borders to live outside of the usual country of residence, not even the passport is usually controlled, indicating the ease of moving to another country within the EU (Carrera, 2005).

An exchange semester, internship or volunteering opportunity outline a few possibilities of gaining experience abroad. In the EU, living in a different country than in the country of residency is viable in part due to the free movement of persons policy, which guarantees movement of people across borders of member states with ease (EFTA & Marit C. Schage Andria, 2022). The impact of an abroad experience has been researched on different topics but in general especially by programs that support people in going abroad. An example

is the EU's program, ERASMUS+, which combines all ERASMUS (European Region Action Scheme for the Mobility of University Students) programs in the EU (European Union, 2022).

The effects of studying abroad are various. Research on EU's exchange program ERASMUS, using a quantitative and qualitative survey with alumni, students, staff and employers, showed that 81% of all ERASMUS students increase their transversal skills and, thus, have better employability skills than 70% of all other students. This leads to a lower unemployability rate of 23% in comparison to non-ERASMUS students, hence studying abroad offers better transversal skills and employability level (European Commission et al., 2017). ERASMUS students are more likely to live abroad; 40% of ERASMUS alumni live outside of their usual country of residence, while the percentage for non-alumni is only 23% (European Commission et al., 2017).

Going abroad is a step out of one's comfort zone and into the unknown, thus implies a certain willingness towards risk. As stated in the introductory quote, it has been reported that students that participated in an ERASMUS program feel more ready to take on new challenges, but is risk preference associated with their experience abroad? So far, the literature primarily investigates the gains of an abroad experience within personal development and employability. However, the question whether an abroad experience influence one's risk preference positively has not yet been answered.

When looking at the effects of abroad experiences, one main piece of research is the systematic review by Maddux and collaborators (2021), who define multicultural experiences as "exposure to or interactions with elements or members of a different culture(s)" (Maddux et al., 2021, p. 346).

Multicultural experiences are based not only on abroad experience, but can also include a) psychologically identifying with more than one country or culture (Cheng et al., 2008; Nguyen & Benet-Martínez, 2013), b) speaking several languages (e.g., (Lambert et al., 1973); Simonton, 2000), c) having relationships with individuals from foreign countries (Lu, Hafenbrack, et al., 2017), d) being part of a multicultural network (Chua, 2018; Shipilov et al., 2017) or e) working environment (Jang, 2017; Tadmor, Satterstrom, et al., 2012) or even f) having parents from different cultures and appreciating foreign food or music (Leung & Chiu, 2010; Maddux et al., 2021; Tadmor et al., 2018; Tadmor, Hong, et al., 2012). Whereas Maddux and collaborators (2021) do not limit the exposure of the experience to within one's usual borders but also includes any named experience within the standard country of residence, this dissertation focuses on international experiences outside of the typical country



of residence. Although the questions involving the exposure within the own country to another culture were included in the survey, the focus lies therein to the relation of an abroad experience on risk preferences.

The main research focus regarding effects of international experiences is within the relation of international experience and creativity. Studies including the Multicultural Experience Survey (Leung & Chiu, 2010), a survey which measures various aspects of multicultural experiences, like abroad experiences and general exposure to foreign cultures and friends, show that participants with a higher score on the scale display more creativity. More specifically, Fee and Gray (2012), Maddux and collaborators (2010) as well as Maddux and Galinsky (2009) found that creativity increases when individuals live abroad. Further research validates this finding, as Shipilov and collaborators (2017) find an increase of creativity when working abroad, and study (Cho & Morris, 2015) as well as travel abroad (de Bloom et al., 2014) sometimes show an effect as well. Maddux and collaborators (2010) and Maddux and Galinsky (2009) find that in comparison to traveling abroad, living abroad experiences have more effect on cultural adaptation and learning about the host culture.

When looking at the impact of abroad experience on personal development, Geeraert and Demoulin (2013) showed an increase of self-esteem and lower levels of stress during and one year after an abroad experience; for a group undergoing the abroad experience in comparison to one staying in the home country. Concerning individual performance, working abroad experience is positively related to higher salaries (Biemann & Braakmann, 2013).

Looking at the managerial impact of abroad experiences, it is interesting to see that when firms are led by founders with international experience, the chances of the company to internationalize or start entrepreneurial ventures abroad is higher than for companies without any international experiences (Yamakawa et al., 2013). Furthermore, international experiences of firms can lead to engagement in international acquisitions (Matta & Beamish, 2008) and can help to reduce mistakes in international arenas like for instance, entering politically unstable markets (García-Canal & Guillén, 2008). Managers with abroad experiences tend to decrease their firms' operating costs (Kulchina, 2017).

Similar to risk preferences, personality traits found to be not static throughout the lifespan (McAdams & Olson, 2010) and can be affected by significant life events (e.g., Boyce et al., 2015). According to Maddux and collaborators (2021), multicultural experiences are one of the life events, that can affect personality traits. Abroad experiences lead to higher levels of openness to experience and agreeableness, as well as lower level on neuroticism (Greischel et al., 2016; Lüdtke et al., 2011; Zimmermann & Neyer, 2013). Furthermore, it

strengthens one's openness towards different cultures (Kokko, 2011). As an abroad experience can affect personality traits and risk preferences can be affected by certain life events, going abroad could be a life event that influences risk preferences.

Despite the breath and dept of Maddux and collaborators' (2021) literature reviewed, that included many topics and more than ten papers, risk aversion was not included. This is showing that there is an important gap to be filled, which I aim to contribute with this dissertation.

## Method

The current dissertation aims to find out if there is a correlation between an experience abroad and risk preference. Due to the resource and time constraints of the dissertation, the dissertation is based on a survey differentiating between respondents who have an abroad experience and those who do not. The binary abroad variable – if people were abroad or not – will be simplified in naming it abroad variable in the proceeding analysis. The survey consists of a demographic part, a questionnaire concerning abroad experience, a self-reported risk propensity scale and two measurements of risk preferences. The full survey can be found in Appendix I. The survey was distributed to fellow students, colleagues, social network, professional network, friends, and family to spread it to a diversity of respondents, with the goal of collecting minimum 80 total respondents with a similar ratio in both groups. After one week, a total 168 participants with a roughly 50/50 distribution over the groups completed the survey and the data collection stopped.

### *Demographics*

Concerning the ambiguous findings in the literature towards age and level of occupation in relation to risk preference, respondents were asked standard demographic questions concerning age, gender, employment status, level of education and total household income. As there is a correlation between Hofstede's cultural dimension uncertainty avoidance and risk attitudes (Rieger et al., 2015), an important factor that will be analyzed is the culture people have been exposed to. Three questions were asked with that aim: 1) country of birth, 2) the country of their childhood and 3) if they identify culturally also to another country. The aim of the three questions was to include the cultural values one has been exposed to, and if a cross-country background already influences risk preference.

### *Abroad questions*

In case the respondent has ever lived outside of his or her usual country of residence, the respondent was asked to rank the countries based on the three most important experiences to their personal development, including the information about the duration of the stay and the purpose (see Appendix). Based on the information given there will be an analysis if the length and purpose of an experience, as well as the destination, influences the relation between abroad experience and risk preference. For this analysis, the answer if there was an abroad experience or not is the main binary variable in the field of abroad experience. If the

respondent denied having an abroad experience, the survey skipped the remaining questions about the abroad experience and continued with the risk scales.

### *Risk scales*

The current study included a total of three risk preference measures. First, to measure the general risk-taking propensity of a person, the General Risk Propensity Scale (GRiPS) by Zhang et al., 2019 was used. In contrast to other measurements of risk, this self-reported scale deals with the nature towards risk attitude and is not domain specific. The GRiPS is used as one of three main dependent variables in the analysis to relate abroad experience to risk propensity (Hypothesis 1) and risk aversion and willingness to live abroad (Hypothesis 4). Respondents answered eight questions such as ‘I am rather attracted, than scared, by taking risks’ and ‘Taking risks make life more fun’ using a Likert scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*).

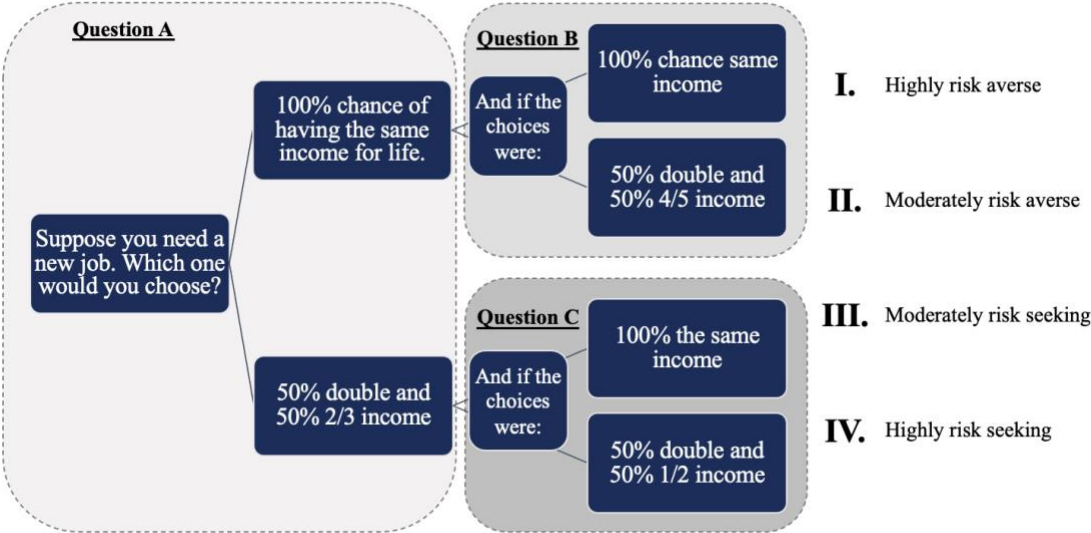
In this scale, an attention check question, in which participants were asked to select “Strongly disagree”, was also posed. Some participants provided feedback that they thought the attention check was a trick question in the context of questions regarding risk, so the question was rephrased to “This is an attention check. Please be so kind and select ‘Strongly disagree’ here”. The second measurement of risk preference was Click or tap here to enter text. a gamble over lifetime income by Barsky and collaborators (1997), improved by Graham and collaborators (2013). Graham and collaborators adjusted the lifetime gamble from Barsky by changing the outcome situation of the respondent from letting him choose between a new job opportunity with a 50% chance of doubling the current income and 50% chance of cutting the current income by a third, or keeping his current job with him being the only income earner in the family, to a forced choice between two new jobs to prevent a status quo bias. The lifetime income gamble asks respondents to choose between two possible jobs (Question A):

- 1) one with 100% chance that the job pays the current lifetime income or
- 2) one with 50% that the job pays twice the current income for life and 50% chance that the job pays 2/3 of the current income for life.

If the respondent chooses the first option, a second choice appears with again the 100% chance of a job paying the current income for life or a 50% chance of a job paying twice and 50% chance of a job paying 4/5 of the current income for life (Question B). If the respondent chooses the second option in the first game, a second choice appears with again a 100%

chance of a job paying the current income for life or a 50% chance of a job paying twice and 50% chance of a job paying 1/2 of the current income for life (Question C). Based on the option they choose; participants are clustered into 4 risk groups, according to Figure 1

Figure 1: Risk groups income over lifetime gamble



The third risk preference measure was the Sabater-Grande-Georgantzis Lottery Panel (Sabater-Grande & Georgantzis, 2002). This lottery panel consisted of four panels in which participants had to choose one payoff with its probability for each panel. The payoffs increased with decreasing probability as well as over the four panels, resulting in a participant choosing a payoff with lower probability being more risk seeking than a participant choosing a payoff with a high probability. Out of the four lottery panels, the average was calculated for each participant. The complete payoffs and probabilities of all lottery panels are shown in Table 1.

Table 1: Lottery panels probability and payoffs

Probability	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
Lottery 1 payoffs	100€	112€	127€	147€	173€	210€	265€	356€	540€	1090€
Lottery 2 payoffs	100€	120€	150€	190€	230€	300€	400€	570€	900€	1900€
Lottery 3 payoffs	100€	166€	250€	357€	500€	700€	1000€	1500€	2500€	5500€
Lottery 4 payoffs	100€	220€	380€	570€	830€	1200€	1750€	2670€	4500€	10000€

### Perceived impacts of abroad experience

Finally, the respondents with an abroad experience were asked for their self-evaluation regarding if the experience changed their level of risk preference, while respondents without abroad experience were asked for their self-evaluation towards if they think an abroad experience would have changed their level of risk preference from 1 (*Definitely not*) to 5 (*Definitely yes*).

## Results

### Data preparation

In total, 171 respondents participated, whereas three did not finish the survey, and 46 did not pass the attention check question, leaving 122 valid answers. Although respondents had the possibility to state also “non-binary / third gender”, “prefer to self-describe” with a text field, and “prefer not to say”, all respondents chose either female or male. Thus, the variable “gender” was transformed to 0 (*male*) and 1 (*female*).

As the survey was spread over my network, 101 out of the 122 respondents were born and spent their childhood in Germany, and the distribution of the residual 21 respondents was less than 5 respondents per country, thus a dummy variable with 0 (*other*) and 1 (*Germany*) for country of birth and country of childhood was built. The third question, if respondents culturally identify with another country, was denied with 67,2%, and besides 5 respondents stating another country than their birth country, respondents choose the same country as their birth and childhood country. Therefore, the question was removed from the analysis. For the occupational status, “A homemaker or stay-at-home parent”, “Retired” and “Other” was aggregated to “Other”, building a total of 6 respondents. For participants with an abroad

experience, the data of the most important experience was aggregated for analysis, as the distribution and number of answers were sufficient: The occupation was aggregated to “studies” and “work and other”, the duration to “1 – 6 months”, “6 – 12 months” and “more than 12 months”, and the countries ranked were aggregated as “low uncertainty avoidance”, “neutral uncertainty avoidance” and “high uncertainty avoidance”, according to their level of uncertainty avoidance based on Hofstede’s cultural values (Hofstede Insights, 2022).

To test the reliability of the GRiPS scale used in the survey, a reliability test was conducted with all eight items of the scale. The overall Cronbach  $a$  was .86, showing a good reliability of all items according to (Gliem & Gliem, 2003). Analysis of the impact of each item on Cronbach’s  $a$  indicated removing GRiPS item 7), a factor analysis followed to search for corroboration on if that item should be deleted from the scale. The factor analysis passed the Kaiser-Meyer-Olkin measure of sampling adequacy ( $KMO = .86$ ) and the Bartlett’s test of sphericity ( $p < .001$ ), showing that the factor analysis can be used. Looking at the correlation matrix (Appendix C), no item is strongly correlated to another item to the point of redundancy (all values  $< .70$ ), suggesting all items should be kept. GRiPS Item 7, however, has correlations below a criterion level of .4. As this item is the same one whose removal would result in a higher Cronbach’s  $a$ , it was removed from the scale. For details see Appendix C.

Running another reliability test and a factor analysis after the exclusion of item 7 showed that, besides the expected increase in Cronbach’s  $a$  (from .86 to .87), all correlations were above the criterion level of .4, except the correlation between GRiPS item 1 and GRiPS item 6. As both items correlate above the criterion level with all other items, the items were kept in the scale. Thus, a GRiPS mean of the seven remaining items was calculated for further analysis.

When analyzing the income gamble, respondents were attributed to one risk group, according to Figure 1 (Barsky et al., 1997).

Finally, when analyzing the lottery panel, and following Sabater-Grande and Georgantzis’ (2002) approach, only respondents who chose the same probability or a riskier one within the proceeding lottery panel were classified as consistent and kept for further analysis. Out of the 122 valid respondents, 31 were inconsistent and removed from further analysis, leaving 91 valid respondents for the lottery analysis. As this test was at the very end of the survey and the inconsistency in results may be due to problems with numeracy (Ehrenberg, 1981), the 32 inconsistent answers were only removed from the analysis of the lottery. Out of the lottery choices, the average of the four panels per participant was built for further analysis. The analysis was conducted as well with the answers of all four panels,

however there was no difference in the analysis when taking the average instead. To simplify the following, only the analysis with the lottery average will be discussed.

## Descriptives

From the 122 valid answers, 63 respondents had an abroad experience and 59 did not. In terms of country of birth, 83.8% of all respondents reported being born and spending their childhood in Germany, which leaves this study mostly related to the German population. The age of respondents was between 18 to 62 ( $M = 31.43$ ,  $SD = 10.88$ ). In terms of gender, 57.4% of the respondents were female and 42.6% male. Frequencies of educational level, employment status and total household income are displayed in Table 2.

*Table 2: Frequencies*

Question	Answers	Frequency	Percentage
What is the highest level of education you completed?	Highschool or less	19	15.6%
	Vocational or less	14	11.5%
	Bachelor degree	45	36.9%
	Graduate	19	15.6%
	Professional degree or more (MS, MA, MBA, PhD, JD, MD, DDS, etc.)	25	20.5%
What best describes your employment status over the last three months?	Working full-time	65	53.3%
	Working part-time	15	12.3%
	Student	36	29.5%
	Other	6	4.9%
What was your total household income before taxes during the past 12 months in Euros?	Less than 25.000 Euros per year	38	31.1%
	25.000 – 49.999 Euros per year	30	24.6%
	50.000 – 99.999 Euros per year	30	24.65
	100.000 – 199.999 Euros per year	14	11.5%
	More than 200.000 Euros per year	3	2.5%
	Prefer not to say	7	5.7%

Respondents with an abroad experience were asked to rank their experience based on the importance to their personal development and state the duration and occupation of each experience. Out of the 63 respondents, 62 ranked the country of their first important



experience, with Portugal (25.8%), Australia (8.1%) and Germany (8.1%) being the most frequent. Then, 45 ranked the country of their second most important experience, with Portugal (13.3%), Netherlands (11.1%) and Uruguay (11.1%) being the most frequent. Finally, only 21 participants indicated the third most important experience, with Netherlands (14.3%) and Portugal, Costa Rica, Germany and Tanzania (all 9.5%) being the most frequent. The duration was stated by 44 respondents for the most important experience, with 6 – 12 months (36.4%), 3 – 6 months (31.8%) and more than 12 months (10.7%) being the most frequent. For the second most important experience, 30 respondents ranked their most frequent duration for 3 – 6 months (46.7%), as well as 6 – 12 months (23.3%) and more than 12 months (23.3%). Lastly, 15 respondents ranked their third important experience with the most frequent durations being more than 12 months (33.3%), 3 – 6 months (26.7%) and 1 – 3 months (20%). Out of all respondents ranking their experiences, 44 specified their occupation for the most important experience with studies (61.4%), full-time employment (15.9%) and work and travel (9.5%) as the most frequent ones. For the second most important experience, 30 respondents specified their occupation as studies (56.7%), internship (13.3%) and full-time employment (10%) as well as other (10%). Lastly, the third important experience was stated by 15 respondents being full-time employment (40%), studies (26.7%) as well as internship (13.3%) and other (13.3%). Aggregating the variables as indicated in the data preparation section results in the frequencies displayed in Table 3.

*Table 3: Frequencies of aggregated variables most important experience*

Variable	Labels	Frequency	Percentage
Country uncertainty avoidance level	Low uncertainty avoidance	11	17.7%
	Neutral uncertainty avoidance	13	21.0%
	High uncertainty avoidance	38	61.3%
Duration aggregated	1 – 6 months	15	34.1%
	6 – 12 months	16	36.4%
	More than 12 months	13	29.5%
Occupation aggregated	Studies	27	61.4%
	Work and other	17	38.6%

In terms of the three risk preference variables, the descriptives were the following: The seven-item GRiPS had a mean of 3.05 and a standard deviation of 0.75. Detailed descriptive statistics concerning the items of the scale can be found in Appendix A. Regarding the lottery panels, the average had a mean of 5.17 and a standard deviation of 2.59. Regarding the risk groups, 27.9% were categorized as Group I (highest risk aversion), 26.2% as Group II, 26.2% as Group III and 19.7% as Group IV (lowest risk aversion).

As the lottery and risk group variables are categorical, Spearman's correlation coefficient was used to calculate the bivariate correlations between variables. Appendix C shows the correlation between all variables (excluding the country ranking of the abroad group). As the country of birth and childhood are highly correlated,  $r_s(120) = .89, p < .001$ , only country of birth is retained for further analysis. Being abroad is only significantly correlated with the measurement of general risk propensity,  $r_s(120) = .37, p < .001$ . The GRiPS is also correlated with risk groups,  $r_s(120) = .33, p < .001$  and lottery,  $r_s(120) = .42, p < .001$ , as well as gender,  $r_s(120) = -.19, p = .041$ , and age,  $r_s(120) = -.26, p = .004$ . The risk groups are correlated with age,  $r_s(120) = -.20, p = .025$ .

The significant correlation between the GRiPS and both gambles validates that the scale is measuring risk preferences. As both gamble measurements do not correlate with each other, but only to the GRiPS, it suggests that the GRiPS indeed is a general measurement of risk propensity and can even predict risk preference in gambles when they do not correlate with each other.

## Hypothesis testing

### *GRiPS*

In order to test the first hypothesis (H1: There is a positive relationship between an abroad experience and a higher general risk propensity), a linear regression was conducted with GRiPS as the outcome variable and abroad experience as the predictor variable. The impact of abroad experience was significant,  $b = 0.54, SE = 0.13, p < .001$ , indicating that having an abroad experience, in contrast with not having one, is associated with higher risk propensity. This model had an  $R^2$  of 0.13.

To see if the relationship of GRiPS with abroad experience is not explained by any of control for variables, a multiple regression was conducted with GRiPS again as outcome variable and abroad experience and all control variables (country of birth, age, gender, employment status, level of education, total household income) as predictors, using the

stepwise method. The final model ( $R^2 = 0.20, p < .001$ ) kept only gender and abroad experience as predictors. Multicollinearity between the two predictor variables could be rejected (Tolerance = .96, VIF = 1.03, Condition Index = 3.2). In this model, abroad experience was a significant predictor,  $b = 0.62, SE = 0.13, p < .001$ , when controlling for other covariates, indicating that having an abroad experience, in comparison with not having one, is associated with higher risk propensity. Gender was also a significant predictor,  $b = -0.42, SE = 0.13, p = .001$ , indicating that men had higher risk propensity than women.

For the case of having an abroad experience, a multiple regression with the GRiPS as dependent and the aggregated variables concerning occupation, duration and uncertainty avoidance level of the most important experience ranked as independent variables was conducted. With all variables being non-significant ( $p > .345$ ), the destination, length and occupation do not influence the general risk propensity. Thus, in contrast to literature (Rieger et al., 2015), the uncertainty avoidance level does not show a significant effect on the general risk propensity. For more detailed information, please see Appendix D.

### *Income gamble*

To test the second hypothesis (H2: There is a positive relationship between an abroad experience and risk behavior in an income over lifetime gamble), an ordinal regression was conducted, showing no significant effect of abroad experience on risk groups,  $b = -0.03, SE = 0.33, p = .936, R^2 = 0.00$ . Despite the non-significant effect, a logistic regression of risk groups as outcome variable and abroad experience as predictor, as well as country of birth, age, gender, employment status, level of education, and total household income as control variables was conducted. It was found that being abroad, in comparison with not being abroad, did not change the odds of belonging to any risk group,  $b = 0.33, SE = 0.45, p = .47$ . Gender however showed again a significant effect on the allocation to a risk group,  $b = 1.14, SE = 0.4, p = .004$ , indicating again that men are more likely to be in a riskier group than women. The same applied for educational level, with a significance for 'Graduate',  $b = -1.4, SE = 0.61, p = .021$ , showing a higher level of risk averseness compared to respondents stated, 'Professional degree or more'. The difference between 'Professional degree or more' and 'Highschool or less, as well as 'Vocational or similar' and 'Bachelor degree' was not significant, all  $p > .096$ . The difference between all employment types and 'other' was not significant, all  $p > .05$ . This model had an  $R^2$  of 0.17. For more detailed information, please see Appendix E.

### *Lottery*

When testing for the third hypothesis (H3: There is a positive relationship between an abroad experience and risk behavior in a lottery gamble), running an ordinal logistic regression with lottery outcome as dependent and abroad as independent variable shows no significant effect,  $b = -0.26$ ,  $SE = 0.37$ ,  $p = .474$ ,  $R^2 = 0.01$ . An ordinal logistic regression with all control variables (country of birth, age, gender, employment status, level of education, and total household income) was conducted, proving again no significant effect of an abroad experience on the choice of lottery,  $b = -0.54$ ,  $SE = 0.51$ ,  $p = .285$ . Despite a larger  $R^2$  of 0.12, this model does not show any significant effect of variables on the lottery outcome. For more detailed information, please see Appendix F.

### *Does an abroad experience influence risk preference?*

So far, the analysis indicates that an abroad experience has a significant relationship with general risk propensity. Although the study does not follow a causal observation technique and it is thus difficult to conclude a causality between the two variables, the following approach aims to find support for a causal impact of abroad experience on risk preference. As respondents stated their willingness to live abroad, the following analyses test if the difference we see between respondents with and without an abroad experience is due to risk preference differences prior to their abroad experience. Thus, this analysis tests whether risk preference is related to willingness to live abroad, as suggestive evidence of the causal effect.

To begin the analysis, a linear regression with the willingness to live abroad as dependent and all three risk measures, including respondents with and without an abroad experience, was conducted. Running the linear regression shows that only GRiPS significantly affects the willingness to live abroad,  $b = 0.82$ ,  $SE = 0.18$ ,  $p < .001$ , showing that participants with a higher score in general risk propensity, and thus a higher tendency towards risk seeking, are more willing to live abroad. This model has an  $R^2$  of 0.11. Running the regression again, including also all control variables (country of birth, age, gender, employment status, level of education, and total household income), age influences the willingness to live abroad as well,  $b = -0.47$ ,  $SE = 0.10$ ,  $p < .001$ , showing that participants' willingness to live abroad decreases with age. The effect of GRiPS changes to  $b = 0.82$ ,  $SE = 0.18$ ,  $p < .001$  when controlling for age. This model has an  $R^2$  of 0.14.

To directly test Hypothesis 4, we conducted the previous linear regression only for respondents without an abroad experience. This test allowed us to exclude a selection effect, in which we could find that people with an abroad experience have higher risk preference because people with higher risk preference are more willing to go abroad in the first place. None of the risk preference measurements had a significant effect on the willingness to live abroad, all  $p > .17$ , with the  $R^2$  of 0.15 for the model. The multiple linear regression with all control variables included shows only a significance of the age,  $b = -0.33$ ,  $SE = 0.01$ ,  $p = .023$ ,  $R^2 = 0.14$ , indicating that with an increasing age, respondents are less likely to live abroad.

Further supporting H4, 93.6% of respondents without abroad experience stated to be somewhat likely or extremely likely to live outside of their usual country of residence. Thus, the data show that the difference in risk propensity of both groups cannot be explained due a priori differences in willingness to live abroad between risk seeking and risk avoidant people. Therefore, this is a first indicator that an abroad experience has an effect on risk preference. As the percentage of respondents without an abroad experience that are unwilling to live abroad is extremely small, this conclusion however has to be treated with caution due to the small sample size. For more detailed information, please see Appendix G.

#### *Is there a difference between self-perception and risk?*

At the end of the survey, respondents were asked if an abroad experience has either made them less risk averse or if they think an abroad experience would have made them less risk averse, depending on their abroad experience. To test whether participants perceive a relation between being abroad and risk preference, a one sample t-test was conducted. The perception of the abroad influence on level of risk preference was significant,  $t(121) = 17.31$ ,  $p < .001$ , indicating that the self-perception aligns with reality. Running a linear regression with the self-perception of risk preference as dependent and all measurements as independent variables shows no significant differences in measurement of risk and self-perception, all  $p > .06$ ,  $R^2 = 0.03$ . Running a multiple regression with all control variables included (country of birth, age, gender, employment status, level of education, and total household income), only age indicates a significant effect on the self-perception,  $b = -0.24$ ,  $SE = 0.10$ ,  $p = .021$ ,  $R^2 = 0.04$ , such that older people perceive abroad experiences cause less of an impact on risk preferences than younger people. The only thing that changes self-perception is age, going abroad does not make one necessarily more aware of this relationship between one's experience and risk preference. For more detailed information see Appendix H.

## Discussion

### Main findings

As the tendency to go abroad is increasing, the dissertation aimed to find out if there is a relation between risk preference and abroad experience. The study used three measurements of risk preference: two gambling measurements and one general risk propensity scale. In all cases, the risk preferences of two different groups were analyzed – one with participants having abroad experience and one without. In line with Hypothesis 1, the effect of an abroad experience on general risk propensity was found to be significant, indicating that participants with an abroad experience were more risk seeking than participants without an abroad experience, when risk preference is measured through general risk propensity scales. In contrast with Hypotheses 2 and 3, the groups did not show a significant difference in the gambling measurements. Thus, when risk preference is measured through gambling tasks, there was no clear effect of an abroad experience on risk behavior.

In terms of control variables, it was found that gender influences general risk propensity, such that male respondents tend to be more risk seeking than female respondents which is in line with literature (Charness & Gneezy, 2012; Croson & Gneezy, 2009). As for the gambling measures, gender was again associated with risk preference in income gambling, showing that men are more risk seeking than women. When forcing respondents to choose between two new jobs with different probabilities of income, respondents that have completed the educational level of graduate were more likely to choose the less risky option compared to respondents who achieved a professional degree or more. For the lottery panel, none of the control variables showed a significant effect. When analyzing the most important experience according to occupation, duration and countries level of uncertainty avoidance, no significant effect on the general risk propensity of participants with abroad experience was found. Results confirmed Hypothesis 4, as the analysis of respondents without an abroad experience showed no significant effect of risk on willingness to live abroad, which shows that it is less likely that risk preference is a result of prior differences. Only age had an impact on willingness to live abroad, such that with increasing age, respondents were less willing to live abroad.

In summary, the main results support the idea that an abroad experience does affect risk preferences, but only when risk preferences are measured using a general risk propensity scale, and evidence suggests this relationship may be causal.

## Implications

The present dissertation offers findings for academic as well as managerial environments. While risk preferences have been widely studied, the focus of previous research lies more in how risk averse or risk seeking behavior influences economic decision making.

For the academic context, although risk preferences have been related to countries and thus cultural background (Rieger et al., 2015), this dissertation focused on the relation of risk preference and abroad experience. The study shows that there is a significant relationship between general risk propensity and abroad experience, indicating that people who have lived abroad are more risk seeking than those who do not have an abroad experience. In line with other lifetime events like childbirth (Görlitz & Tamm, 2020), this study gives indications that an abroad experience can influence the risk preference of an individual.

For the managerial context, following Graham and collaborators (2013) results of companies preferring less risk averse CEOs to increase the performance of the company, an indication for a matching fit when hiring new employees could be the existence of an abroad experience. Furthermore, less risk averse CEOs are usually working at companies with a high growth rate (Graham et al., 2013). As the start-up market in Europe is increasing and start-ups have a potential to reach high growth rates, the selection of employees for start-ups could be also influenced by an existing abroad experience. Hiring individuals with an abroad experience furthermore raises the chances of internationalization of a company (Yamakawa et al., 2013) and reduces the chances of making mistakes when going international as a company (García-Canal & Guillén, 2008).

With the COVID-19 pandemic, the possibilities to work remotely and from anywhere improved, bringing an increase of digital nomads (Hermann et al., 2020). The incentive to go abroad is higher as the possibilities are growing, making it easier to leave one's comfort zone. Furthermore, companies prefer less risk averse CEOs as a lower level of risk aversion benefits the incentive pay and thus the performance of the company (Graham et al., 2013). The study supports that companies should engage their employees to experience time abroad. Not only the various improvements of abroad experiences for example on creativity (de Bloom et al., 2014; Tadmor, Satterstrom, et al., 2012), also the benefits of risk seeking in managerial context suggests that an abroad experience and thus increasing level of risk seeking should be supported by managers.

Risk seeking is, however, not always a positive influence, as Zhang and collaborators (2019) show that risk takers are less satisfied with their jobs, engage in more deviant

behaviors at work and experience more stress. Knowing that abroad experience can nudge risk seeking, managers can take the negative impact of risk seeking behavior into account when employees have an abroad experience and engage employees in activities to release stress and increase satisfaction. Furthermore, in certain occupations, for instance where a high level of stress is given, it might be best to hire employees without abroad experience.

### Limitations and Future Research

The current research gives first indications about how abroad experiences and risk preferences are related. Due to time constraints of the dissertation, a longitudinal study to measure the risk preferences of a group before and after going abroad could not be realized. Although the study shows that having an abroad experience is positively related to being more risk seeking, testing the causality of this relationship would be interesting. The study of risk preference on willingness to live abroad gives first indications that an abroad experience influences risk propensity, however future research as described to validate causality would be of interest.

When respondents were asked three different questions concerning their culture (country of birth, childhood and culturally identified), the questions were aimed to find out if respondents with a different migration background or that grew up more internationally are less risk averse already than the ones that always lived in their country of birth. Out of 122 respondents, 95.9% (117 respondents) however grew up in the country they were born in, and according to the lack of answers concerning the question if they culturally identify with another country, the answers could not have been counted as valid. Therefore, another research with a focus in if internationally raised respondents are different in their risk preference than respondents without any exposure to internationality, could be interesting for further research.

Furthermore, as 82.8% of all respondents were born and raised in Germany, the research is mostly related to the German population. As I am from Germany and a high percentage of Católica students are German, the survey was mostly filled out by my network and former colleagues. A study with a more international distribution could be interesting, especially in regards to the cultural values according to Hofstede (2001). Germany has a very high score in uncertainty avoidance, which could be influencing the general risk preferences (Hofstede Insights, 2022). According to Rieger and collaborators (2015), countries with high uncertainty avoidance are more risk averse in gains and more risk seeking in losses. As both



gambling measurements were in the mixed domains and the GRiPS is not domain-specific, a research of how cultural values influence the general risk propensity could be of interest. One way to measure this would be to build scores in the cultural values of uncertainty avoidance and individualism according to different countries and investigate the effect of the cultural background. This was conducted with the abroad experience countries, however not showing a significant effect on general risk propensity.

Respondents with abroad experience ranked their most important experiences according to occupation, duration, and country. The countries were aggregated according to their level of uncertainty avoidance (Hofstede Insights, 2022). However, there was no significant effect on general risk propensity. One reason for that could be that many respondents stated the country of their abroad experience to be Portugal. With most respondents being German, there is not a big difference in level of uncertainty avoidance between Portugal and Germany, both countries account as high in uncertainty avoidance (Hofstede Insights, 2022). Thus, an investigation of the effect with the abroad experience in a country very different to the country of residence would be of interest. As the survey was distributed to fellow students, the reasoning behind that could be that a lot of respondents were students at Católica Lisbon SBE, so there was less dispersion in the data. An interesting insight would be also to conduct research with more dispersion in usual residual country as well as country of abroad experience, differentiating in how far away from their country of residence participants went and analyzing if the distance and the cultural differences between the home country and country of abroad experience influence the risk preference.

The measurements of risk preferences are various, especially in the domains of gains, losses and mixed. The measurements chosen were supposed to build a picture of behavior towards risk in the mixed domain, however other measurements could have built a different conclusion. Research including all existing measures towards risk preferences could provide a more detailed picture of an abroad experience relating to risk behavior. Two gambling measurements were chosen to increase the probability of respondents understanding it correctly and to provide reliable insights on risk behavior. The data preparation of the lottery game, however, showed many participants with inconsistent answers, which could be because of the game being at the end of the survey and exaggerating the attention span or because respondents had issues concerning numeracy. Lottery gambles are criticized for experience-description gap, indicating a different result in reality than in a gamble (Hertwig & Erev, 2009). Furthermore, decision tasks that are used to elicit risk preferences are often subject to a considerable amount of measurement error (Andreas Pedroni et al., 2017; Frey et al., 2017).

Based on feedback received by participants, in the income gamble, the question of which job to choose if one is the only income earner in a household could be influenced by having a family, since participants stated they feel more risk averse towards taking care of family members than when they are not solely responsible for the household income. Thus, the question might be reframed, or a different measurement should be used, where participants are choosing according to their risk preferences solely towards their own good. In contrast to this intuition, the difference in risk preference towards oneself or others however is not significant according to Batteux and collaborators (2019).

The study of Zhang and collaborators (2019) already showed a difference in risk perception and risk propensity, stating that two people with similar risk propensity might perceive risk differently and thus differently engage in risky behavior. The GRiPS is rather a measurement of risk propensity than perceived risk. Although all of the measurements correlate, abroad experience only influences the general risk propensity. The significance only on the risk propensity could indicate that abroad experience do not influence risk behavior, but only their general nature towards it.

## Conclusion

The current dissertation aimed to find out if a relation between abroad experiences and risk preferences exists. Measuring risk behavior with an income over lifetime gamble and lottery panel did not show a significant relation with regard to having an abroad experience or not. The general risk propensity, however, measured using the GRiPS scale, showed a significant relation to having an abroad experience. Thus, an indication of abroad experience increases the nature towards risk to being more risk seeking is given. Managerial implications to this outcome were given, as were first implications about the causality of the relation. Although the study aimed to cover a great dispersion of nationalities, it is mostly skewed to the German population. Future studies suggest to further investigate the causality of this relationship as well as the difference of abroad experience in countries with differences in levels of uncertainty avoidance.

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## Appendix

### Appendix A

Table 4: Labels and measurements of the GRiPS

Label	Question	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	Mean	SD
<b>Grips 1</b>	Taking risks makes life more fun	1	2	3	4	5	3.69	1.029
<b>Grips 2</b>	My friends would say that I am a risk taker	1	2	3	4	5	2.83	1.096
<b>Grips 3</b>	I enjoy taking risks in every aspect of my life	1	2	3	4	5	2.68	1.039
<b>Grips 4</b>	I would take a risk even if it meant I might get hurt	1	2	3	4	5	2.66	1.161
<b>Grips 5</b>	Taking risks is an important part in my life	1	2	3	4	5	2.79	1.108
<b>Grips 6</b>	I commonly make risky decisions	1	2	3	4	5	2.70	1.044
<b>Grips 7</b>	I am a believer of taking chances	1	2	3	4	5	4.03	.927
<b>Grips 8</b>	I am attracted, rather than scared, by risk	1	2	3	4	5	3.02	1.036

## Appendix B: Reliability of the GRiPS

### I. Reliability Test

Table 5

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.861	.859	8

Table 6

#### Item–Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item–Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GRIPS 1: Taking risks makes life more fun	20.70	28.656	.591	.450	.846
GRIPS 2: My friends would say that I'm a risk taker	21.57	26.975	.707	.519	.832
GRIPS 3: I enjoy taking risks in most aspects of my life	21.71	27.000	.755	.628	.827
GRIPS 4: I would take a risk even if it meant I might get hurt	21.73	28.199	.541	.362	.853
GRIPS 5: Taking risks is an important part of my life	21.61	27.249	.670	.539	.837
GRIPS 6: I commonly make risky decisions	21.70	28.444	.601	.439	.845
GRIPS 7: I am a believer of taking chances	20.36	31.836	.338	.165	.871
GRIPS 8: I am attracted, rather than scared, by risk	21.38	27.923	.660	.499	.838

Table 7

**Inter-Item Correlation Matrix**

	GRIPS 1: Taking risks makes life more fun	GRIPS 2: My friends would say that I'm a risk taker	GRIPS 3: I enjoy taking risks in most aspects of my life	GRIPS 4: I would take a risk even if it meant I might get hurt	GRIPS 5: Taking risks is an important part of my life	GRIPS 6: I commonly make risky decisions	GRIPS 7: I am a believer of taking chances	GRIPS 8: I am attracted, rather than scared, by risk
GRIPS 1: Taking risks makes life more fun	1.000	.553	.509	.347	.521	.273	.236	.524
GRIPS 2: My friends would say that I'm a risk taker	.553	1.000	.597	.441	.521	.474	.315	.584
GRIPS 3: I enjoy taking risks in most aspects of my life	.509	.597	1.000	.561	.680	.535	.243	.535
GRIPS 4: I would take a risk even if it meant I might get hurt	.347	.441	.561	1.000	.381	.420	.133	.451
GRIPS 5: Taking risks is an important part of my life	.521	.521	.680	.381	1.000	.473	.329	.428
GRIPS 6: I commonly make risky decisions	.273	.474	.535	.420	.473	1.000	.310	.532
GRIPS 7: I am a believer of taking chances	.236	.315	.243	.133	.329	.310	1.000	.215
GRIPS 8: I am attracted, rather than scared, by risk	.524	.584	.535	.451	.428	.532	.215	1.000

I. *Factor Analysis*

Table 8

**KMO and Bartlett's Test<sup>a</sup>**

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.863
Bartlett's Test of Sphericity	Approx. Chi-Square	389.822
	df	28
	Sig.	<.001

a. Based on correlations

Table 9

**Correlation Matrix**

		GRIPS 1: Taking risks makes life more fun	GRIPS 2: My friends would say that I'm a risk taker	GRIPS 3: I enjoy taking risks in most aspects of my life	GRIPS 4: I would take a risk even if it meant I might get hurt	GRIPS 5: Taking risks is an important part of my life	GRIPS 6: I commonly make risky decisions	GRIPS 7: I am a believer of taking chances	GRIPS 8: I am attracted, rather than scared, by risk
Correlation	GRIPS 1: Taking risks makes life more fun	1.000	.553	.509	.347	.521	.273	.236	.524
	GRIPS 2: My friends would say that I'm a risk taker	.553	1.000	.597	.441	.521	.474	.315	.584
	GRIPS 3: I enjoy taking risks in most aspects of my life	.509	.597	1.000	.561	.680	.535	.243	.535
	GRIPS 4: I would take a risk even if it meant I might get hurt	.347	.441	.561	1.000	.381	.420	.133	.451
	GRIPS 5: Taking risks is an important part of my life	.521	.521	.680	.381	1.000	.473	.329	.428
	GRIPS 6: I commonly make risky decisions	.273	.474	.535	.420	.473	1.000	.310	.532
	GRIPS 7: I am a believer of taking chances	.236	.315	.243	.133	.329	.310	1.000	.215
	GRIPS 8: I am attracted, rather than scared, by risk	.524	.584	.535	.451	.428	.532	.215	1.000

II. Reliability test with 7 items GRiPS

Table 10

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.871	.872	7

Table 11

**Inter-Item Correlation Matrix**

	GRIPS 1: Taking risks makes life more fun	GRIPS 2: My friends would say that I'm a risk taker	GRIPS 3: I enjoy taking risks in most aspects of my life	GRIPS 4: I would take a risk even if it meant I might get hurt	GRIPS 5: Taking risks is an important part of my life	GRIPS 6: I commonly make risky decisions	GRIPS 8: I am attracted, rather than scared, by risk
GRIPS 1: Taking risks makes life more fun	1.000	.553	.509	.347	.521	.273	.524
GRIPS 2: My friends would say that I'm a risk taker	.553	1.000	.597	.441	.521	.474	.584
GRIPS 3: I enjoy taking risks in most aspects of my life	.509	.597	1.000	.561	.680	.535	.535
GRIPS 4: I would take a risk even if it meant I might get hurt	.347	.441	.561	1.000	.381	.420	.451
GRIPS 5: Taking risks is an important part of my life	.521	.521	.680	.381	1.000	.473	.428
GRIPS 6: I commonly make risky decisions	.273	.474	.535	.420	.473	1.000	.532
GRIPS 8: I am attracted, rather than scared, by risk	.524	.584	.535	.451	.428	.532	1.000

# Appendix C: Correlational matrix

Table 12

		Correlations													
		Birthcountry	Childhoodcountry	How old are you?	How do you describe yourself? - Selected Choice	Employment	What is the highest level of education you have completed?	What was your total household income before taxes during the past 12 months in Euros?	Have you ever lived outside of your usual country of residence?	In this study, I am interested in people's experiences living abroad. How likely do you think you are to live outside your usual country of residence (both short-term and long-term)? This refers to both, if you have already lived abroad and if you are interested to do so in the future.	GRIPS_M	Lottery_AVG	Riskgroup	Selfreported_RP	
Spearman's rho	Birthcountry	Correlation Coefficient	1.000	.885**	.162	-.042	-.021	-.220*	.001	-.354**	-.360**	-.124	.076	.018	-.018
		Sig. (2-tailed)	.	<.001	.076	.648	.821	.015	.992	<.001	<.001	.173	.404	.840	.846
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	Childhoodcountry	Correlation Coefficient	.885**	1.000	.140	-.042	-.021	-.249**	-.048	-.267**	-.342**	-.148	-.044	-.023	-.020
		Sig. (2-tailed)	<.001	.	.124	.648	.821	.006	.597	.003	<.001	.103	.627	.802	.827
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	How old are you?	Correlation Coefficient	.162	.140	1.000	-.180*	-.560**	.074	.423**	-.432**	-.352**	-.261**	-.039	-.063	-.238**
		Sig. (2-tailed)	.076	.124	.	.047	<.001	.418	<.001	<.001	<.001	.004	.672	.488	.008
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	How do you describe yourself? - Selected Choice	Correlation Coefficient	-.042	-.042	-.180*	1.000	.080	.105	-.281**	.194	-.185*	-.169	-.203*	.102	
		Sig. (2-tailed)	.648	.648	.047	.	.381	.252	.002	.032	.056	.041	.063	.025	.265
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	Employment	Correlation Coefficient	-.021	-.021	-.560**	.080	1.000	-.177	-.322**	.215*	.253**	.118	.080	.029	.266**
		Sig. (2-tailed)	.821	.821	<.001	.381	.	.051	<.001	.017	.005	.195	.381	.755	.003
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	What is the highest level of education you have completed?	Correlation Coefficient	-.220*	-.249**	.074	.105	-.177	1.000	.080	.150	.100	.099	.018	-.020	.099
		Sig. (2-tailed)	.015	.006	.418	.252	.051	.	.383	.099	.275	.278	.847	.831	.279
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	What was your total household income before taxes during the past 12 months in Euros?	Correlation Coefficient	.001	-.048	.423**	-.281**	-.322**	.080	1.000	-.252**	-.212*	-.142	.076	-.067	-.114
		Sig. (2-tailed)	.992	.597	<.001	.002	<.001	.383	.	.005	.019	.120	.403	.464	.209
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	Have you ever lived outside of your usual country of residence?	Correlation Coefficient	-.354**	-.267**	-.432**	.194*	.215*	.150	-.252**	1.000	.648**	.368**	.056	.007	.120
		Sig. (2-tailed)	<.001	.003	<.001	.032	.017	.099	.005	.	<.001	<.001	.539	.937	.186
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	In this study, I am interested in people's experiences living abroad. How likely do you think you are to live outside your usual country of residence (both short-term and long-term)? This refers to both, if you have already lived abroad and if you are interested to do so in the future.	Correlation Coefficient	-.360**	-.342**	-.352**	.174	.253**	.100	-.212*	.648**	1.000	.371**	.139	.064	.081
		Sig. (2-tailed)	<.001	<.001	<.001	.056	.005	.275	.019	<.001	.	<.001	.127	.483	.374
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	GRIPS_M	Correlation Coefficient	-.124	-.148	-.261**	-.185*	.118	.099	-.142	.368**	.371**	1.000	.423**	.330**	.125
		Sig. (2-tailed)	.173	.103	.004	.041	.195	.278	.120	<.001	<.001	.	<.001	<.001	.171
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	Lottery_AVG	Correlation Coefficient	.076	-.044	-.039	-.169	.080	.018	.076	.056	.139	.423**	1.000	.127	-.059
		Sig. (2-tailed)	.404	.627	.672	.063	.381	.847	.403	.539	.127	<.001	.	.163	.515
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	Riskgroup	Correlation Coefficient	.018	-.023	-.063	-.203*	.029	-.020	-.067	.007	.064	.330**	.127	1.000	-.049
		Sig. (2-tailed)	.840	.802	.488	.025	.755	.831	.464	.937	.483	<.001	.163	.	.589
		N	122	122	122	122	122	122	122	122	122	122	122	122	122
	Selfreported_RP	Correlation Coefficient	-.018	-.020	-.238**	.102	.266**	.099	-.114	.120	.081	.125	-.059	-.049	1.000
		Sig. (2-tailed)	.846	.827	.008	.265	.003	.279	.209	.186	.374	.171	.515	.589	.
		N	122	122	122	122	122	122	122	122	122	122	122	122	122

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed).

## Appendix D - GRiPS

### I. Linear Regression

Table 13

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.359 <sup>a</sup>	.129	.122	.70508

a. Predictors: (Constant), Have you ever lived outside of your usual country of residence?

Table 14

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.771	.092		30.189	<.001
	Have you ever lived outside of your usual country of residence?	.538	.128	.359	4.214	<.001

a. Dependent Variable: GRiPS\_M

### II. Multiple Regression

Table 15

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.359 <sup>a</sup>	.129	.122	.70508
2	.449 <sup>b</sup>	.202	.188	.67779

a. Predictors: (Constant), Have you ever lived outside of your usual country of residence?

b. Predictors: (Constant), Have you ever lived outside of your usual country of residence?, How do you describe yourself? – Selected Choice



Table 16

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.771	.092		30.189	<.001
	Have you ever lived outside of your usual country of residence?	.538	.128	.359	4.214	<.001
2	(Constant)	2.969	.107		27.820	<.001
	Have you ever lived outside of your usual country of residence?	.618	.125	.412	4.940	<.001
	How do you describe yourself? – Selected Choice	-.417	.126	-.275	-3.295	.001

a. Dependent Variable: GRIPS\_M

III. *Ranking on GRiPS*

Table 17

**Model Summary**

Model	R Have you ever lived outside of your usual country of residence? = Yes (Selected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.216 <sup>a</sup>	.047	-.025	.69422

a. Predictors: (Constant), Rankedoccupation, UncertaintyAvoidance, Rankedduration

Table 18

**Coefficients<sup>a,b</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.150	.259		12.168	<.001
	UncertaintyAvoidance	-.052	.135	-.059	-.383	.704
	Rankedduration	.127	.133	.149	.955	.345
	Rankedoccupation	.168	.218	.121	.770	.446

a. Dependent Variable: GRiPS\_M

b. Selecting only cases for which Have you ever lived outside of your usual country of residence?  
= Yes

Appendix E – Income Gamble

I. Ordinal Regression

Table 19

**Parameter Estimates**

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Riskgroup = 1.00]	-.963	.256	14.142	1	<.001	-1.465	-.461
	[Riskgroup = 2.00]	.152	.240	.403	1	.526	-.318	.623
	[Riskgroup = 3.00]	1.395	.276	25.513	1	<.001	.854	1.936
Location	[Binary_abroad=0]	-.026	.325	.006	1	.936	-.662	.610
	[Binary_abroad=1]	0 <sup>a</sup>	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

## II. Ordinal Regression with control variables

Table 20

		Parameter Estimates						95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound	
Threshold	[Riskgroup = 1.00]	-.153	1.039	.022	1	.883	-2.190	1.884	
	[Riskgroup = 2.00]	1.114	1.046	1.136	1	.287	-.935	3.164	
	[Riskgroup = 3.00]	2.523	1.063	5.632	1	.018	.439	4.606	
Location	Age	-.010	.021	.231	1	.631	-.052	.032	
	[Binary_abroad=0]	.251	.409	.377	1	.539	-.551	1.054	
	[Binary_abroad=1]	0 <sup>a</sup>	.	.	0	.	.	.	
	[Birthcountry=.00]	.052	.490	.011	1	.916	-.908	1.011	
	[Birthcountry=1.00]	0 <sup>a</sup>	.	.	0	.	.	.	
	[Gender=0]	1.143	.400	8.178	1	.004	.360	1.926	
	[Gender=1]	0 <sup>a</sup>	.	.	0	.	.	.	
	[Employment=.00]	.701	.882	.632	1	.427	-1.027	2.429	
	[Employment=1.00]	-.172	.483	.126	1	.722	-1.118	.775	
	[Employment=2.00]	-.368	.649	.322	1	.570	-1.640	.904	
	[Employment=5.00]	0 <sup>a</sup>	.	.	0	.	.	.	
	[Education_level=1]	-.148	.619	.058	1	.810	-1.362	1.065	
	[Education_level=2]	-1.183	.687	2.965	1	.085	-2.530	.164	
	[Education_level=3]	-.303	.502	.365	1	.546	-1.287	.680	
	[Education_level=4]	-1.396	.607	5.293	1	.021	-2.585	-.207	
	[Education_level=5]	0 <sup>a</sup>	.	.	0	.	.	.	
	[Household_income=1]	1.583	.814	3.779	1	.052	-.013	3.179	
	[Household_income=2]	1.363	.843	2.611	1	.106	-.290	3.016	
	[Household_income=3]	.812	.832	.951	1	.329	-.820	2.444	
	[Household_income=4]	1.306	.945	1.912	1	.167	-.545	3.157	
[Household_income=5]	2.594	1.406	3.403	1	.065	-.162	5.350		
[Household_income=6]	0 <sup>a</sup>	.	.	0	.	.	.		

Link function: Logit.

a. This parameter is set to zero because it is redundant.

## Appendix F – Lottery

### I. Ordinal Regression

Table 21

		Parameter Estimates					95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Lottery_AVG = 1.00]	-2.961	.490	36.553	1	<.001	-3.921	-2.001
	[Lottery_AVG = 1.50]	-2.456	.406	36.517	1	<.001	-3.252	-1.659
	[Lottery_AVG = 1.75]	-2.209	.375	34.772	1	<.001	-2.944	-1.475
	[Lottery_AVG = 2.00]	-1.823	.335	29.655	1	<.001	-2.479	-1.167
	[Lottery_AVG = 2.25]	-1.588	.316	25.335	1	<.001	-2.207	-.970
	[Lottery_AVG = 2.50]	-1.449	.306	22.450	1	<.001	-2.048	-.849
	[Lottery_AVG = 2.75]	-1.257	.294	18.277	1	<.001	-1.834	-.681
	[Lottery_AVG = 3.00]	-.869	.276	9.907	1	.002	-1.411	-.328
	[Lottery_AVG = 3.25]	-.769	.273	7.944	1	.005	-1.303	-.234
	[Lottery_AVG = 3.50]	-.576	.267	4.641	1	.031	-1.100	-.052
	[Lottery_AVG = 3.75]	-.529	.266	3.949	1	.047	-1.051	-.007
	[Lottery_AVG = 4.00]	-.346	.263	1.735	1	.188	-.861	.169
	[Lottery_AVG = 4.25]	-.257	.262	.962	1	.327	-.770	.256
	[Lottery_AVG = 4.50]	-.212	.261	.659	1	.417	-.724	.300
	[Lottery_AVG = 4.75]	.054	.260	.043	1	.837	-.457	.564
	[Lottery_AVG = 5.00]	.325	.263	1.529	1	.216	-.190	.839
	[Lottery_AVG = 5.50]	.418	.264	2.501	1	.114	-.100	.935
	[Lottery_AVG = 5.75]	.465	.265	3.078	1	.079	-.054	.985
	[Lottery_AVG = 6.00]	.819	.276	8.831	1	.003	.279	1.359
	[Lottery_AVG = 6.25]	.930	.280	11.006	1	<.001	.380	1.479
	[Lottery_AVG = 6.50]	1.046	.286	13.390	1	<.001	.486	1.606
[Lottery_AVG = 6.75]	1.169	.293	15.959	1	<.001	.596	1.743	
[Lottery_AVG = 7.00]	1.301	.301	18.686	1	<.001	.711	1.892	
[Lottery_AVG = 7.25]	1.372	.306	20.096	1	<.001	.772	1.971	
[Lottery_AVG = 7.75]	1.445	.311	21.527	1	<.001	.835	2.056	
[Lottery_AVG = 8.00]	1.523	.318	22.974	1	<.001	.900	2.145	
[Lottery_AVG = 9.00]	1.691	.333	25.851	1	<.001	1.039	2.343	
[Lottery_AVG = 9.25]	1.784	.342	27.245	1	<.001	1.114	2.454	
[Lottery_AVG = 9.75]	1.883	.352	28.576	1	<.001	1.193	2.574	
Location	[Binary_abroad=0]	-.264	.370	.512	1	.474	-.989	.460
	[Binary_abroad=1]	0 <sup>a</sup>	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

### II. Ordinal Regression with control variables

Table 22

		Parameter Estimates						
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Lottery_AVG = 1.00]	-2.897	2.254	1.652	1	.199	-7.315	1.521
	[Lottery_AVG = 1.50]	-2.358	2.237	1.111	1	.292	-6.742	2.027
	[Lottery_AVG = 1.75]	-2.086	2.231	.874	1	.350	-6.460	2.287
	[Lottery_AVG = 2.00]	-1.667	2.225	.561	1	.454	-6.028	2.694
	[Lottery_AVG = 2.25]	-1.418	2.222	.407	1	.523	-5.774	2.937
	[Lottery_AVG = 2.50]	-1.270	2.221	.327	1	.567	-5.623	3.083
	[Lottery_AVG = 2.75]	-1.062	2.220	.229	1	.632	-5.412	3.288
	[Lottery_AVG = 3.00]	-.631	2.218	.081	1	.776	-4.977	3.716
	[Lottery_AVG = 3.25]	-.516	2.217	.054	1	.816	-4.862	3.830
	[Lottery_AVG = 3.50]	-.302	2.217	.019	1	.892	-4.648	4.043
	[Lottery_AVG = 3.75]	-.252	2.217	.013	1	.910	-4.597	4.093
	[Lottery_AVG = 4.00]	-.055	2.217	.001	1	.980	-4.400	4.290
	[Lottery_AVG = 4.25]	.041	2.217	.000	1	.985	-4.304	4.386
	[Lottery_AVG = 4.50]	.089	2.217	.002	1	.968	-4.256	4.434
	[Lottery_AVG = 4.75]	.374	2.217	.029	1	.866	-3.972	4.720
	[Lottery_AVG = 5.00]	.662	2.218	.089	1	.765	-3.685	5.010
	[Lottery_AVG = 5.50]	.762	2.218	.118	1	.731	-3.586	5.110
	[Lottery_AVG = 5.75]	.814	2.219	.135	1	.714	-3.534	5.163
	[Lottery_AVG = 6.00]	1.202	2.221	.293	1	.588	-3.150	5.554
	[Lottery_AVG = 6.25]	1.322	2.221	.354	1	.552	-3.032	5.675
	[Lottery_AVG = 6.50]	1.446	2.222	.423	1	.515	-2.910	5.801
	[Lottery_AVG = 6.75]	1.576	2.223	.502	1	.478	-2.782	5.933
	[Lottery_AVG = 7.00]	1.712	2.225	.592	1	.441	-2.648	6.072
	[Lottery_AVG = 7.25]	1.785	2.225	.643	1	.423	-2.577	6.146
	[Lottery_AVG = 7.75]	1.861	2.226	.699	1	.403	-2.503	6.224
	[Lottery_AVG = 8.00]	1.940	2.227	.759	1	.384	-2.425	6.305
[Lottery_AVG = 9.00]	2.110	2.229	.896	1	.344	-2.259	6.480	
[Lottery_AVG = 9.25]	2.202	2.231	.975	1	.324	-2.170	6.575	
[Lottery_AVG = 9.75]	2.302	2.233	1.063	1	.302	-2.074	6.678	
Location	Age	.008	.023	.133	1	.715	-.036	.053
	[Binary_abroad=0]	-.450	.461	.950	1	.330	-1.354	.454
	[Binary_abroad=1]	0 <sup>a</sup>	.	.	0	.	.	.
	[Countrybirth=.00]	-.703	.561	1.571	1	.210	-1.802	.396
	[Countrybirth=1.00]	0 <sup>a</sup>	.	.	0	.	.	.
	[Gender=0]	.319	.448	.506	1	.477	-.559	1.197
	[Gender=1]	0 <sup>a</sup>	.	.	0	.	.	.
	[Employment=.00]	-.676	.970	.485	1	.486	-2.576	1.225
	[Employment=1.00]	-.373	.564	.436	1	.509	-1.479	.733
	[Employment=2.00]	-.857	.727	1.390	1	.238	-2.282	.568
	[Employment=5.00]	0 <sup>a</sup>	.	.	0	.	.	.
	[Education_level=1]	-.455	.645	.497	1	.481	-1.720	.810
	[Education_level=2]	.558	.751	.552	1	.458	-.914	2.030
	[Education_level=3]	.308	.558	.304	1	.582	-.786	1.401
	[Education_level=4]	1.023	.622	2.706	1	.100	-.196	2.243
	[Education_level=5]	0 <sup>a</sup>	.	.	0	.	.	.
	[Household_income=1]	-.039	2.056	.000	1	.985	-4.070	3.991
	[Household_income=2]	-.032	2.063	.000	1	.988	-4.075	4.012
	[Household_income=3]	.120	2.048	.003	1	.953	-3.895	4.135
	[Household_income=4]	.563	2.086	.073	1	.787	-3.525	4.651
[Household_income=5]	.553	2.286	.059	1	.809	-3.928	5.034	
[Household_income=6]	0 <sup>a</sup>	.	.	0	.	.	.	

Link function: Logit.

a. This parameter is set to zero because it is redundant.

## Appendix G – Willingness to live abroad

Table 23

<b>Model Summary</b>				
Model	R Have you ever lived outside of your usual country of residence? = No (Selected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367 <sup>a</sup>	.135	.111	1.158

a. Predictors: (Constant), How old are you?

Table 24

<b>Coefficients<sup>a,b</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.936	.551		7.144	<.001
	How old are you?	-.033	.014	-.367	-2.366	.023

a. Dependent Variable: In this study, I am interested in people's experiences living abroad. How likely do you think you are to live outside your usual country of residence (both short-term and long-term)? This refers to both, if you have already lived abroad and if you are interested to do so in the future.

b. Selecting only cases for which Have you ever lived outside of your usual country of residence? = No

## Appendix H – Self-perception

### I. One-sample t-test

Table 25

<b>One-Sample Test</b>							
Test Value = 1							
	t	df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p		Lower	Upper
Selfreported_RP	17.313	121	<.001	<.001	1.91803	1.6987	2.1374

II. Linear Regression

Table 26

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.181 <sup>a</sup>	.033	.008	1.21867

a. Predictors: (Constant), Riskgroup, Lottery\_AVG, GRiPS\_M

Table 27

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.461	.475		5.180	<.001
	Lottery_AVG	-.052	.047	-.111	-1.118	.266
	GRiPS_M	.321	.169	.197	1.895	.061
	Riskgroup	-.105	.107	-.094	-.983	.328

a. Dependent Variable: Selfreported\_RP

Appendix I – Survey

Intro

***Informed consent***

Dear Participant,

This study is being run as part of a Master's Thesis at Católica Lisbon School of Business and Economics (CLSBE), at Universidade Católica Portuguesa. Your responses will help better understand the relationship between existing or non-existing abroad experiences and attitudes towards risk. You can participate in both cases if you have had an abroad experience or not.

Your participation in this study is completely anonymous and voluntary. There are no right or wrong answers and all answers are entirely anonymous - therefore I kindly ask you to answer as honestly as possible.

Please try to answer the survey on a larger screen (e.g., a tablet, PC or laptop).

This study should take around 8 minutes to conclude. If you have any questions, please do not hesitate to reach out via [s-sleonhardt@ucp.pt](mailto:s-sleonhardt@ucp.pt)

Thank you for your participation.  
Svenja Leonhardt

**Thank you very much in advance for your time and your support by participating in this study. Please give your consent below and click on the arrow to start the study.**

Intro I have read and understood the consent from above and I agree to participate in this study.

I consent, begin the study (1)

I do not consent (2)

*Skip To: End of Survey If I have read and understood the consent from above and I agree to participate in this study. = I do not consent*

Q1 In which country were you born?

▼ Afghanistan (1) ... Zimbabwe (193)

Q2 In which country did you spend most of your childhood?

▼ Afghanistan (1) ... Zimbabwe (193)

Q3 If you identify yourself more (or additionally) with a culture other than selected above, please select it below.

▼ I don't identify with any other than selected above. (194) ... Zimbabwe (193)

Q4 How old are you?

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Q4 How do you describe yourself?

- Male (1)
- Female (2)
- Non-binary / third gender (3)
- Prefer to self-describe (4) \_\_\_\_\_
- Prefer not to say (5)

Q4 What best describes your employment status over the last three months?

- Working full-time (1)
- Working part-time (2)
- Unemployed and looking for work (3)
- A homemaker or stay-at-home parent (4)
- Student (5)
- Retired (6)
- Other (7)

Q5 What is the highest level of education you have completed?

- Highschool or less (1)
- Vocational or similar (2)
- Bachelor degree (3)
- Graduate (4)
- Professional degree or more (MS, MA, MBA, PhD, JD, MD, DDS etc.) (5)
- Prefer not to say (6)

Q6 What was your total household income before taxes during the past 12 months in Euros?

- Less than 25,000 Euros per year (1)
- 25,000 - 49,999 Euros per year (2)
- 50,000 - 99,999 Euros per year (3)
- 100,000 - 199,999 Euros per year (4)
- More than 200,000 Euros per year (5)
- Prefer not to say (6)

Q7 In this study, I am interested in people's experiences living abroad. How likely do you think you are to live outside your usual country of residence (both short-term and long-term)? This refers to both, if you have already lived abroad and if you are interested to do so in the future.

- Extremely unlikely (1)
- Somewhat unlikely (2)
- Neither likely nor unlikely (3)
- Somewhat likely (4)
- Extremely likely (5)

Q8 Have you ever lived outside of your usual country of residence?

- Yes (1)
- No (2)

*Skip To: Q12 If Have you ever lived outside of your usual country of residence? = No*

Q9 Please list the countries you have lived abroad, starting with the one you consider the most relevant for your personal development. For each country, please list how long you lived in that country and what you have been doing.

	In which country was your experience?	How long did you stay in that country?	What did you do in that country?
<hr/>			

Most important experience (1)	▼ Afghanistan (1 ... Curaçao (194)	▼ Less than one month (1 ... More than 12 months (5)	▼ Studies (1 ... Work and Travel (6)
2nd most important experience (2)	▼ Afghanistan (1 ... Curaçao (194)	▼ Less than one month (1 ... More than 12 months (5)	▼ Studies (1 ... Work and Travel (6)
3rd most important experience (3)	▼ Afghanistan (1 ... Curaçao (194)	▼ Less than one month (1 ... More than 12 months (5)	▼ Studies (1 ... Work and Travel (6)

---

Q10 Please answer all questions as honest and true as possible, only your honest answer will help the research.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Taking risks makes life more fun (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends would say that I'm a risk taker (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy taking risks in most aspects of my life (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take a risk even if it meant I might get hurt (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This is an attention check. Please be so kind and select 'Strongly disagree' here (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking risks is an important part of my life (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I commonly make risky decisions (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am a believer of taking chances (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am attracted, rather than scared, by risk (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 Imagine you are playing a lottery and have the following payoffs and probabilities. In this example, the first game has 100% probability of winning 100€, 90% probability of winning 112€ and so on. Please choose which lottery you would prefer.

	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
	100€ (1)	112€ (2)	127€ (3)	147€ (4)	173€ (5)	210€ (6)	265€ (7)	356€ (8)	540€ (9)	1090€ (10)
Lottery 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 Imagine you are playing a lottery and have the following payoffs and probabilities. Please choose which lottery you would prefer.

	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
	100€ (1)	120€ (2)	150€ (3)	190€ (4)	230€ (5)	300€ (6)	400€ (7)	570€ (8)	900€ (9)	1900€ (10)
Lottery 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Imagine you are playing a lottery and have the following payoffs and probabilities. Please choose which lottery you would prefer.

	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
	100€ (1)	166€ (2)	250€ (3)	357€ (4)	500€ (5)	700€ (6)	1000€ (7)	1500€ (8)	2500€ (9)	5500€ (10)
Lottery 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 Imagine you are playing a lottery and have the following payoffs and probabilities. Please choose which lottery you would prefer.

	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
	100€ (1)	220€ (2)	380€ (3)	570€ (4)	830€ (5)	1200€ (6)	1750€ (7)	2670€ (8)	4500€ (9)	10000€ (10)
Lottery 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 Suppose you are the only income earner in your household. Your doctor recommends you move because of allergies. You have to choose between two possible jobs (choose one):

- 100% chance that the job pays your current income for life. (1)
- 50% chance that the job pays twice your current income for life and 50% chance that the job pays  $\frac{2}{3}$  of your current income for life. (2)

---

*Display This Question:*

*If Suppose you are the only income earner in your household. Your doctor recommends you move because... = 100% chance that the job pays your current income for life.*

Q16 Which job would you choose if the choices were instead:

- 100% chance that the job pays your current income for life. (1)
- 50% chance that the job pays twice your current income for life and 50% chance that the job pays  $\frac{4}{5}$  of your current income for life. (2)

---

*Display This Question:*

*If Suppose you are the only income earner in your household. Your doctor recommends you move because... = 50% chance that the job pays twice your current income for life and 50% chance that the job pays  $\frac{2}{3}$  of your current income for life.*

Q17 Which job would you choose if the choices were instead:

- 100% chance that the job pays your current income for life. (1)
- 50% chance that the job pays twice your current income for life and 50% chance that the job pays  $\frac{1}{2}$  of your current income for life. (2)

---

*Display This Question:*

*If Have you ever lived outside of your usual country of residence? = Yes*

Q18 One last thing: Do you feel that your abroad experience has made you less risk averse?

- Definitely not (1)
  - Probably not (2)
  - Might or might not (3)
  - Probably yes (4)
  - Definitely yes (5)
- 

*Display This Question:*

*If Have you ever lived outside of your usual country of residence? = No*

Q19 One last thing: Do you feel that an abroad experience would have made you less risk averse?

- Definitely not (1)
  - Probably not (2)
  - Might or might not (3)
  - Probably yes (4)
  - Definitely yes (5)
-