



IMPACT EVALUATION OF THE VIVA SEGURO FINANCIAL EDUCATION PROGRAM FROM FASECOLDI IN RADIO AND WORKSHOPS

EXECUTIVE SUMMARY



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Impact Evaluation of the Viva Seguro Financial Education Program
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Prologue

Risks such as unemployment, illness, death or natural disaster, are present in our lives and we rarely are prepared to deal with them. The mechanisms most often used to resolve the effects of an adverse shock are going into debt, using savings, reducing spending and dropping out of school, which demonstrate a lack of planning. This could be the result of underestimating the risks, or a lack of knowledge about how to protect ourselves.

A survey contracted by Fasecolda and carried out with nearly 1,000 radio listeners in Bogotá, Barranquilla and Pereira indicated that 44% of those surveyed believed to be exposed or moderately exposed to risks. Likewise, 85% mentioned knowing of at least one insurance policy, the most mentioned being the compulsory health coverage plan. Facing the question, what is an insurance premium, claim, deductible and exclusion, only 27% of those surveyed answered correctly.

Since 2009, Fasecolda has been implementing the Viva Seguro Financial Education Program with the aim of developing consumer skills and potential financial consumers, allowing them to make informed decisions on their risk management, and the insurance policies that can be purchased to mitigate those risks.

The program seeks to raise awareness of risks, to increase the recognition of the different financial instruments available in the market to manage them, to show how the insurance works, to provide information that should be taken into account before, during and after purchasing insurance, and to inform insured parties about their rights and obligations. The Viva Seguro program is being distributed through various channels such as radio, workshops, print materials, the internet and others, reaching to date an audience of about five million people.

In 2011, Fasecolda asked the Universidad de los Andes to carry out an impact evaluation of the program in order to identify its impact. The evaluation concentrated on the impact of the training program carried out through workshops and radio programming. The evaluation's results could then enable Fasecolda to focus and efficiently allocate resources to the initiatives with a better cost-benefit relationship. The evaluation was carried out with resources donated by the International Labour Organization - ILO's Microinsurance Innovation Facility.

This document contains the most relevant results of the three-year research initiative. The research is a valuable academic exercise for the insurance industry. Moreover, it provides fundamental input for decision making in the industry and with other stakeholders in the financial education field in Colombia and abroad, regarding the reach, limitations and the course to be followed for this type of initiative.

The results of the evaluation reflect an improvement in the knowledge and perceptions of risks and the types of insurance available to the individuals exposed to the workshops and the radio program. This is positive and shows that the intention of generating awareness on the risks and how to face those risks is paying off. Nevertheless, the major challenge is in translating that greater awareness and knowledge into concrete decisions, a result that was not observed in the study.

The research conducted by the Universidad de los Andes invites the insurance industry to reflect on how to reduce the gap between information and action. This work is already occurring, demonstrating the importance of financial education from the insurance industry as an engine pushing for financial inclusion and consumer protection.

JORGE H. BOTERO
CEO
Fasecolda

1. Introduction

Financial education is a subject which has acquired relevance over the last decade in the academic world and in politics. There are several factors that explain this trend.

- Education is and will always be a key factor for development. Thus, research is necessary regarding a successful implementation within the target population. In particular, financial education is important due to a clear lack of knowledge on these issues within adult and young adult populations around the world (Xu and Zia, 2012).
- There has been a significant increase in recent years on the availability, type, complexity and the number of financial products such as credit cards, mortgages, commercial credit, micro-credit, insurance and microinsurance. These products are frequently offered to clients who are low-income and have low education levels – lacking basic financial education concepts. Therefore, this type of illiteracy affects financial inclusion and the proper use of the industry's products.
- Around the world, there has been an increase in financial education programs that accompany some of these products. In many cases, financial education is even mandatory for financial institutions, meaning that significant time and resources are dedicated to this goal. It is essential to understand whether or not these efforts are effective.

However, little is known about the cost-efficiency relationship of the financial education programs, or if they really help people acquire the necessary financial skills for the modern world. Unfortunately, there is minimal rigorous causal evidence that helps to discern these questions. This is especially true for the specific case of financial education on insurance and microinsurance. Most of the studies available in the economic literature suffer from self selection problems and therefore the results are not necessarily causal and could be highly biased. Gradually these weaknesses are being overcome in the literature.

This document attempts to help fill the literary void in financial education on risk management and insurance, by presenting the results of a randomized experiment carried out in Colombia between 2011 and 2012. The experiment was designed by the Federation of Colombian Insurers (Fasecolda) and the Center on Economic Development Studies (CEDE) at the Universidad de

los Andes. Its objective is to estimate the impact of Fasescolda's Viva Seguro Financial Education Program on the radio and in workshops.

The document is divided into six sections, beginning with the present introduction, followed by the history of Fasescolda's Viva Seguro Financial Education Program, and a brief description of its main characteristics. The third section presents the methodology used during the impact evaluation. The fourth section describes the radio component and a presentation of its main results. The fifth section details the workshop component and the presentation of its results. Finally, the sixth section contains the most relevant conclusions.¹

1 For readers interested in the details of the evaluation we suggest reading the five reports of the impact evaluation provided to Fasescolda, which include: a literary review, a description of the methodology used in the evaluation, a detailed description of the information collected and the details of the impact results found in each of the components- radio and workshops. The reports can be downloaded on the website of Fasescolda 's Viva Seguro Financial Education Program, www.vivasegurofasescolda.com

2. Background of Fasescolda's Viva Seguro Financial Education Program

Since 2008, Fasescolda has promoted financial education on insurance in Colombia. For this reason, they developed the text "Are you insured?² Protect yourself!", which is an adaptation of the Global Financial Education Program led by Microfinance Opportunities and Freedom from Hunger."

The content of the main text used by Fasescolda looks to provide knowledge and tools to help people in five specific areas: i) raise awareness of risks; ii) improve behavior regarding risks; iii) raise awareness about insurance and improve the perception of insurance, with the aim of iv) making better decisions and being more knowledgeable about risk management, and thus v) improve behaviors in the face of risks and reduce the vulnerability in the case of unexpected events which generate severe financial impacts (Diaz and Pinzón, 2011).

Initially, the content was distributed through workshops held with the support of the National Training Service (SENA) to unemployed low-income individuals who were beneficiaries of unemployment insurance through Cajas de Compensación³ or family compensation funds. After acquiring experience in this strategy, and hoping to increase the scope of the financial education program, Fasescolda designed a special program to be used with radio stations. The object of this study is to look at the impact of both methodologies, workshops and radio, on the individuals who benefited from them.

² Translator's Note: Once again, the use of "seguro" has a double meaning. In this case ¿Está Usted Seguro? Literally means, Are you sure? But also plays off of seguro, meaning insurance.

³ Translator's Note: These are the private agencies known as "family compensation funds" which administer the resources enterprises are legally required to contribute to subsidize their employees' families.

3. Methodology

The objective of the impact evaluation is to measure, through quantitative methods, the impact of a program or policy on a set of individuals. This kind of evaluation has gained importance in recent years given that policy makers and non-profit organizations, among others, have begun to ask themselves which programs or public policies work and which do not. In this regard, impact evaluations are used to reveal the reality of many programs, and therefore they can affect resource allocation decisions and correct “impression based judgments” about particular programs (Bernal and Pena, 2011).

The most complicated problem to solve in an impact evaluation is to establish the difference between the result of the interest variable of an individual who participates in the program and the result in that same variable and individual in the absence of the program. It is impossible to observe both results at the same time. Therefore, the impact evaluation must establish a credible comparison group of individuals who, without access to the program, would have had similar results to that of people who were exposed to the program (Duflo et al., 2007).

To evaluate the impact of Fasescolda’s Viva Seguro Financial Education Program, a random experiment was designed and implemented for the radio and workshop components. Specifically, for each component a set of individuals were selected and randomly assigned to the treatment group, therefore receiving financial education on risk and insurance, either through the radio program or face-to-face workshops. In addition, a group of individuals was also selected as a control group for each component; these individuals were not beneficiaries and therefore did not receive any of the financial education programs evaluated in this study.

With this methodology, the causal effect of the financial education program is measured by the difference in the average value of the variables of interest between both groups. For this evaluation, the evaluated interest variables are: knowledge of the number and type of risks individuals face, knowledge of the number and type of insurance products available on the market, knowledge of specific insurance concepts, an individual’s ability to understand an insurance policy, the rights and obligations of the insured party and their attitude towards insurance, among other issues. The results of these experiments, having no selection bias, generated reliable causal estimates, and thus are useful for assessing the impact of programs and public policies (Bernal and Pena, 2011).

The results presented are based on two different identification strategies: difference in differences and instrumental variables⁴. In the first strategy there are three important assumptions: i) self-selection of individuals in the treatment group does not exist; ii) the attrition in the sample is random⁵ and iii) there are no measurement errors in the dependent and independent variables. With the controlled experiment designed exclusively for this evaluation, it is expected that the first condition be fully met. The two other conditions are subject to the characteristics of the program implementation and data collection which may or may not be random in any evaluation. However, the evaluation structure of the workshop and radio components allows for the assessment and correction of potential problems in any of the mentioned assumptions. In particular, it is common to use an instrumental variable strategy to solve endogeneity problems that may be associated with self-selection, omitted variables or measurement problems. Also, in the particular case of the impact evaluation of the workshops, the results are presented under a third methodology, Propensity Score Matching (PSM).

4 The description of the complete methodology and each of the estimates is found in the report documents of the Impact Evaluation of Fasescolda's Financial Education Program in the workshop and radio component, respectively.

5 In impact evaluation studies, attrition occurs when it is not possible to collect information on people who were selected as part of the experiment's original sample group. It is common in this type of evaluation that some people abandon the experiment for any number of reasons. What is important, however, is that the people who abandon the study be "identical" in both the treatment and control groups.

4. Summary of the Impact Evaluation of the Viva Seguro Financial Education Program on the radio

The use of mass media is one of the current trends in microinsurance education. It is worth mentioning some of the strategies utilized around the world. For example, the South African Insurance Association has a radio education program, which was evaluated using qualitative and quantitative instruments and methodologies (Craig and MacGuinness, 2011). In addition, the National Insurance Confederation (CNSeg) in Brazil utilizes a radio soap opera and videos to disseminate its educational material (Dror et al, 2010). In India, the Micro Insurance Academy (MIA) produced a Bollywood style film which tells the story of a town where the young people seek to increase its inhabitants' prosperity through health microinsurance. (MIA, 2010).

With the hope of increasing the scope of the financial education program, Fasesolda designed a special program to be used with radio stations. Thanks to the experience gained with the adaptation of the text "Are you insured? Protect yourself!", they created new content appropriate for use on the radio program "Viva Seguro." The radio program Viva Seguro has a total of 36 episodes with an estimated duration of 41 minutes each, and are designed to be transmitted Monday to Friday over a seven-week period. The program's content is divided into five main themes:

- I. Which risks do you know of and which have happened to you? How were you affected financially? How did you respond and how effective was that response?
- II. Financial instruments to deal with emergencies.
- III. Types of insurance.
- IV. Know your policy.
- V. Consumer protection.

Each of the episodes is divided into 18 different segments which include a summary of the previous episodes, a short talk with an expert, a daily soap opera, interviews with listeners, a daily contest, and songs related to the issues analyzed (Diaz and Pinzón, 2011).

For this evaluation, six radio stations were selected, two in Bogotá, two in Pereira and two in Barranquilla: three of the stations broadcast the financial education program Viva Seguro (treatment stations) and the other three did not (control stations) and continued with their regular programming. All stations are members of one of the country's largest communications conglomerates (RCN) and agreed to participate in the experiment. Broadcast details of Viva Seguro and the control stations are presented in Table 1.

Table 1. Registry and broadcast of the program Viva Seguro (2011)

City	Registration dates	Program Broadcast Dates	Broadcast schedule	Treatment station	Control station
Bogotá	May 23rd to August 3rd	August 8th to September 27th	10:00 am to 11:00 am	Amor Stereo 1.340 AM – 96.3 FM	La Cariñosa 610 AM
Barranquilla	September 12th to October 19th	October 24th to December 15th	9:15 am to 10:00 am	El Sol 1.550 AM	Radio Uno 95.6 FM
Pereira	September 24th to October 12th	October 24th to December 15th	10:30am to 11:15am	La Cariñosa 1.210 AM	Radio Uno 94.7 FM

Source: Fasecolda, 2011

Before program broadcasting began, a contest was held at the six radio stations (the three treatment stations where the program was aired and three additional control stations) to motivate people's participation and to become eligible to win prizes. All parties interested in the contest had to register and answer a 20-minute questionnaire designed especially for the evaluation. These surveys were conducted before broadcasting the financial education program on the treatment stations. The information collected in this first stage corresponds to the evaluation of baseline information.

During the broadcast period of the program Viva Seguro, at the respective time, contests were held with different prizes at the treatment and control stations seeking listener loyalty to the station where they were registered. In addition, a final prize was awarded approximately six months after the broadcast of the final episode of the financial education program Viva Seguro in each city. To participate in the final contest, the treatment and control participants had to answer a follow-up survey to evaluate the impact of the radio program, corresponding to the follow-up monitoring information. Graph 1 summarizes the design of the impact evaluation of the radio component.

Graph 1. Design of the Impact Evaluation of the radio program - "Viva Seguro"

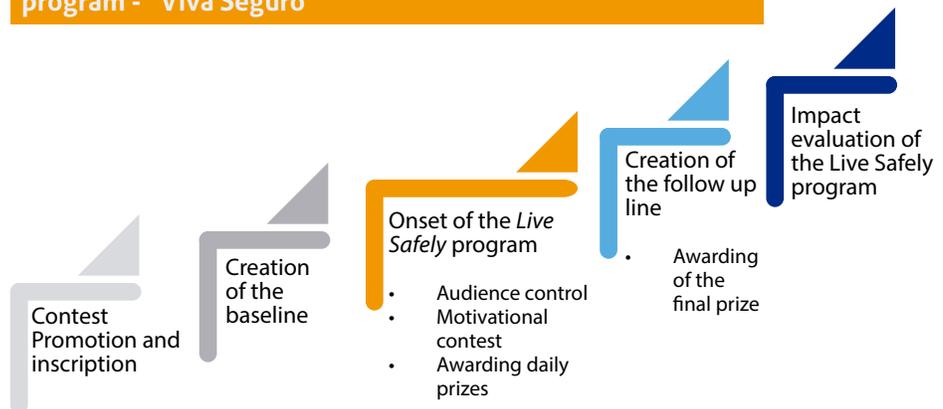


Table 2 shows the total number of individuals from which it was possible to collect information for the baseline and follow-up surveys. Unfortunately, the attrition level between the baseline and follow-up is significant, reaching 35% of listeners in Bogotá and 62% in Pereira. In fact, due to the high level of attrition in Barranquilla (80%) it was decided that the information from that city would not be used, and therefore the results presented in this document only reflect information gathered in Bogotá and Pereira. In the former two cities, it was possible to gather baseline information and follow-up monitoring with 430 individuals, 225 of which claimed to have heard the program on one of the two treatment stations.

Table 2. Number of individuals in the impact evaluation - radio

City	Number of individuals		Attrition (%)
	Baseline	Follow-up line	
Bogotá	428	276	35,5
Pereira	409	154	62,3
Total	837	430	48,6

Source: baseline and follow-up surveys

As described in Angrist and Pischke (2002), a high attrition rate does not necessarily affect the internal validity of an experiment – what is important is that there is no bias between the individuals who abandoned the experiment, and those

who did not. Statistical analysis, detailed in the evaluation reports, allowed for the conclusion that the socio-economic characteristics of the individuals who answered both surveys are very similar to that of those who only responded to the baseline. Similarly, there are no substantial differences in the socio-economic characteristics of the treatment group (those enrolled through a radio station where the program was broadcast) and the control group (those enrolled through a station where the program was not broadcast). These two factors allow for confidence in the results found and presented here.

In Table 3, some of the socio-economic characteristics of the individuals who answered the baseline and follow-up surveys are shown. As can be observed, the majority of the participants are women (72% of baseline participants and 69% of the follow-up). The average participant age is 49 years old with an educational level of less than 9 years of education. In addition, more than 60% of the population registered in the contest, has a monthly income equal to or less than \$500,000⁶, that is to say, less than a legal monthly minimum wage.⁷ Finally, 42% of the listeners work outside of the home [employed] while 36% work in the home [unemployed].

Table 3. Socio-economic characteristics - radio

Variables	Baseline	Follow-up line
% female gender	0,72	0,69
Average age	48,35	49,22
Average years of education	8,56	8,70
% at each income level		
\$0-\$250,000	0,36	0,35
\$250,000-\$500,000	0,28	0,30
\$500,000-\$750,000	0,21	0,20
\$750,000 - \$1,000,000	0,08	0,09
More than \$1,000,000	0,07	0,06
% in each type of occupation		
Employed	0,39	0,42
Household duties	0,38	0,36
Other	0,23	0,22
No. of observations	837	430

Source: Fasescolda. Baseline and follow-up survey in Bogotá and Pereira - radio

6 Translator's Note: All monetary values are in Colombian Pesos.

7 In 2011, the monthly minimum wage plus the transportation subsidy was \$599,200, amounting to approximately US\$ 300 at the February 2014 exchange rate of approximately \$2030 pesos per dollar.

4.1. Results from Difference in Difference

Results from the difference in difference (DID) strategy, with individuals' fixed effects, suggest that mass media is an effective delivery method for financial education in several aspects. In particular, we find that those who have listened to the Viva Seguro Financial Education Program, increased their knowledge on the kinds of risks that they might be exposed to; the number and type of insurance products that they know about; and their perceived capacity to identify risks and insurance concepts. However, no impact was found regarding specific knowledge on insurance policy concepts, such as the premium, the deductible or where to present a claim. Similarly, no effect was found regarding the participants' attitudes towards insurance products or savings to respond to unexpected events that would generate a major financial impact (see Table 4).

Table 4. Impact results of the radio program - DID

Dependent variable	DID with fixed effects per individual
Number of risks that they are exposed to	0.410*** (0.107)
Number of known insurance products	0.783*** (0.169)
Average knowledge of insurance concepts	0.140 (0.159)
Attitude towards risk and insurance	0.0142 (0.0181)
Perceived capacity regarding knowledge on risk and insurance	0.0776*** (0.0247)
Savings	-0.0214 (0.0491)
Savings for emergencies	-0.00846 (0.0302)
Number of insurance products purchased in the last six months	-0.0191 (0.0390)
Interest in buying insurance	0.0250 (0.0490)

Standard errors in parentheses. (***) $p < 0.01$, (**) $p < 0.05$, (*) $p < 0.1$ significance)

These results are consistent with the Viva Seguro program structure: of the 36 episodes broadcast, seven were related to risk identification and 10 focused on the different types of insurance on the market. That is to say, about half of the radio program's episodes were focused on the two issues where a positive impact was seen.

In addition, it is important to acknowledge that achieving a significant change in an individual's behavior is not easy, a fact which is frequently documented in the literature. For example, in the impact evaluation of the financial education program for youth "Finance for Change" in Colombia there were no significant impacts in these areas, despite the fact that financial education was taught directly to students in a classroom setting (García, 2012).

4.2. Result of Instrumental Variables

As mentioned in the previous section, it is possible that the coefficient of interest is biased due to implementation problems in the randomized experiment. For example, it is possible that the people who remained in the experiment are different from those who did not, or that there were problems in the data collection phase. In this case, it is possible that the people who answered both the baseline and follow-up surveys were different from those who only answered the baseline. Similarly, it is possible that information collection via telephone could have induced responses or generated measurement errors.

In order to control for possible endogeneity problems a specification with instrumental variables was implemented. In particular, the instrument used is the radio station that each individual was listening to at the time of entering the contest – in other words, the radio station that they traditionally listen to. With this methodology it should be clear that the coefficient of interest in the evaluation would indicate the impact that the broadcast of the program Viva Seguro had on individuals who are part of the experiment.

Table 5 shows the differences that exist between the number of people who mentioned having heard the program in the follow-up survey and the number of people who signed up at one of the treatment stations at the beginning of the contest. In accordance with the responses from the follow-up line, a total of 225 people reported having heard the program Viva Seguro. On the other hand, only 150 individuals enrolled through a radio station where the program was going to be broadcasted. Precisely, these differences allow for the instrumental variable procedures to be carried out.

Table 5. People who listened to the program Viva Seguro vs. broadcasting station

	Number of people who listened to the program	Broadcasting station = treatment station
Yes	225	150
No	205	280

Source: Fasescolda. Baseline and follow-up survey in Bogotá and Pereira.

The results of the impact estimates of the Viva Seguro Financial Education program, under instrumental variables are similar to those obtained under the difference in difference strategy, although a little stronger. In principle this could suggest two things: i) there was some kind of self-selection in unobserved and changing variables over time which determined the treatment group or the selection in the sample or ii) there were random measurement errors in the dependent and independent variables.

Once again, given the experimental design of the evaluation, it is hard to imagine that there be some kind of self-selection in the treatment group. Although there might be some sort of self-selection in the sample, specifically given the high attrition level in the follow-up line, or measurement errors in the interest variables when data was collected, this methodology would adjust for them, making the results under instrumental variables robust to these two concerns.

Table 6 shows the results obtained in the second stage of the instrumental variables strategy with individuals' fixed effects for all the variables of interest. It is clear that Fasescolda's Viva Seguro Financial Education Program on the radio had a positive impact on people's knowledge of the number and type of risks that they are exposed to (1.12 standard deviation); in the amount and types of insurance products available on the market (0.85 standard deviation); and also in the perception of an individual's capacity in risk management and their knowledge on insurance (0.5 standard deviation).

However, once again no effect was seen regarding knowledge of specific concepts related to an insurance policy, attitudes towards risks or insurance, nor in the desired behavior.

Table 6. Impact results of the radio program - Instrumental variables

Dependent variable	Instrumental variables with fixed effects
Number of risks that they are exposed to	0.907*** (0.271)
Number of known insurance products	1.157*** (0.417)
Average knowledge of insurance concepts	0.120 (0.391)
Attitude towards risk and insurance	0.0241 (0.0446)
Perceived capacity regarding knowledge on risk and insurance	0.112* (0.0610)
Number of insurance products purchased in the last six months	0.00728 (0.0961)
Interest in buying insurance	0.0913 (0.121)

Standard errors in parentheses. (***) $p < 0.01$, (**) $p < 0.05$, (*) $p < 0.1$ significance)

5. Summary of the Impact Evaluation of the Viva Seguro Financial Education Program in the workshops

The impact evaluation of the workshop component also had a randomized design. In particular, the evaluation measures the impact of a face-to-face financial education workshop with a total duration of eight hours divided into two four hour sessions. Like the radio program, the objective of the content is to promote an increased awareness of the risks individuals are exposed to, to improve their knowledge on the appropriate strategies to confront them, and to increase their knowledge and attitudes towards insurance products.

Initially, the target population was composed of the Cajas de Compensación beneficiary group for unemployment insurance, specifically people who were enrolled in the training workshops offered by these entities. The courses trained individuals in different areas such as beauty, cooking, driving, computer systems, among others, and it is the target population which in general they look to impact. However, various problems arose making it impossible to carry out the experiment among the unemployed population. Alternatively, Fasecolda proposed evaluating the workshops' impact among students studying technical, technological and professional degrees at the Fundación Universitaria Unipanamericana of the Compensar Caja de Compensación, with a specific focus on students taking night courses.

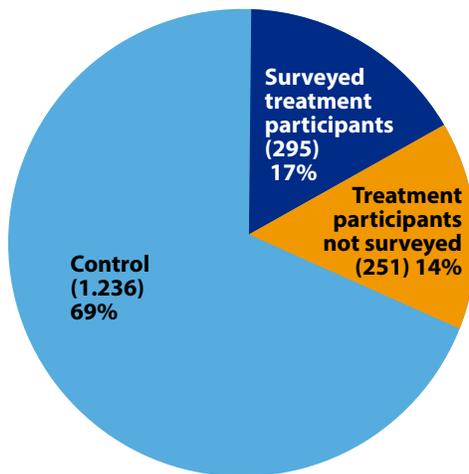
The idea behind the experimental design for the impact evaluation of the workshops is simple and seeks, in the best possible way, to eliminate the selection bias commonly faced by these types of estimates. Specifically, from the list of all the courses in the first semester of 2012 offered at Unipanamericana, a few courses were chosen at random where students would receive the two sessions of the workshop and other courses where the regular curriculum of the classes would continue. It is important to note that with this design the population is limited to students as a treatment (and control) population, while insurance financial education workshops are usually taught to a variety of population groups.

The baseline surveys were carried out directly with Unipanamericana students in classrooms based on the randomization proposed by CEDE. The survey phase was conducted between January 30th and February 24th of 2012. In

total 1,519 students in 25 technical and professional programs were surveyed. Subsequently, financial education workshops were held on risk and insurance with the treatment group. These were held between February 28th and May 8th of 2012. In total, 546 students were trained through the 8 hour workshop.

However, several challenges were faced that hampered both the implementation of the original randomized evaluation strategy as well as follow-up data collection. Initially, when it was time to give the workshops, it was not possible to maintain the original classes that were selected for the treatment and control groups respectively. This meant that not all trained students were part of the groups surveyed in the baseline. For example, while 295 individuals who were treated have baseline information, 251 treated individuals were not surveyed at baseline. The treatment and control groups are distributed as shown in Graph 2.

Graph 2. Treatment and control groups according to baseline information and workshops attendance lists (%)



Source: Fasescolda. Baseline and follow-up surveys for Unipanamericana workshops

There were also problems when follow-up information was collected. Originally, the implementation of the follow-up was planned for six months after the workshops took place, in other words in November of 2012. To do so it was necessary to gather students surveyed in the baseline and those who had been trained but were not initially in the experiment, which meant a total student population to be surveyed of 1,357⁸. However, since it was a new semester and the students who were to be surveyed were in different classes, it was impossible to repeat the exercise class by class to implement the survey.

⁸ Of the approximately 1,519 students surveyed for the baseline, it was not possible to contact those students who had left incomplete contact or identification information, thus they were not included in the follow up.

In October of 2012, the first information collection strategy implemented was to set up a Fasecolda stand so that students who should be interviewed could voluntarily approach the stand to complete the survey. With this aim, advertising was placed throughout the University and emails were sent to students. As an incentive, an iPad 2 and 15 debit cards worth \$200,000 each were raffled among the students who completed the survey. Despite the efforts, only 61 students were surveyed of the 1,357 students to be surveyed.

The second strategy implemented was a telephone survey. This activity was carried out between November and December 2012, with a very low success rate as only 279 students were surveyed. Finally, a final telephone survey attempt reached an additional 160 students in January of 2013.

Table 7 shows the total number of individuals from whom it was possible to collect both the baseline and follow-up information (survey carried out between November of 2012 and January of 2013). Unfortunately, the attrition level between the baseline and follow-up is significant, reaching 75% of the students.

Table 7. Level of attrition between baseline and follow-up -workshops

Students	Number of individuals		Attrition (%)
	Baseline	Follow-up line	
Baseline and follow-up line	1,519	382	75%
Follow-up line only	-	106	-
Total	1,537	488	-

Source: Fasecolda. Baseline and follow-up survey for Unipanamericana workshops

Table 8 shows some of the socio-economic characteristics from individuals who answered the baseline and follow-up survey as a part of the impact evaluation of the workshop component. As can be observed, the students have an average of 14 years of education and around 50% of the baseline individuals and 47% of the follow-up individuals are women. The students in the follow-up are 0.7 years older, an expected difference since the follow-up survey was applied between six and 10 months after the baseline. Regarding income levels, about 80% of the students report a monthly income exceeding \$500,000.

Table 8. Socio-economic characteristics - workshops

Variables	Baseline	Follow-up line
% female gender	0.50	0,47
Average age	25,4	26,1
Average years of education	13,7	14,8
% at each income level		
\$0-\$250,000	0,12	0,09
\$250,000-\$500,000	0,09	0,12
\$500,000-\$750,000	0,33	0,31
\$750,000 - \$1,000,000	0,26	0,29
More than \$1,000,000	0,20	0,19
% in each type of occupation		
Works	0,71	0.70
Does not work	0,16	0,15
Other	0,13	0,15
No. of observations	1.519	480

Source: Fasescolda. Baseline and follow-up surveys for Unipanamericana workshops

5.1. Results from Difference in Difference

The results under the DID strategy with individuals' fixed effects, suggest that the workshop's educational impact on the students regarding risks and insurance products was low. In particular, we find that the students who participated in the workshop increased their knowledge on the kinds of risks that they could be exposed to. However, no impact was seen in any of the other indicators related to the number of known insurance products, nor specific knowledge of insurance policy concepts. Similarly, no effect was found regarding the participants' attitudes and perceived capacities regarding insurance products or savings to respond to unexpected events that would generate a major financial impact. Nor was a significant impact from the workshops seen in other behavioral variables such as how to buy insurance or future interest in purchasing insurance (see Table 9).

Table 9. Impact results of the workshops - DID

Dependent variable	DID with fixed effects per individual
Number of risks that they are exposed to	0.261** (0.126)
Number of known insurance products	0.289 (0.240)
Average knowledge of insurance concepts	0.239 (0.197)
Attitude towards risk and insurance	-0.013 (0.022)
Perceived capacity regarding knowledge on risk and insurance	0.037 (0.023)
Savings	0.043 (0.070)
Savings for emergencies	0.003 (0.042)
Number of insurance products purchased in the last six months	0.006 (0.046)
Interest in buying insurance	0.098 (0.072)

Standard errors in parentheses. (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ significance)

5.2. Result of Instrumental Variables

As mentioned in the methodology section, it is possible that the coefficient of interest is biased due to different reasons: i) the students who answered the follow-up surveys are different from those who were not interested in doing so; (ii) random measurement errors in the attendance lists at workshops as well as surveys; or (iii) the methodology change in the implementation of the surveys.

To solve these potential problems a specification with instrumental variables was also implemented. The instrument used in this case is the class that each student was enrolled in during the first semester of 2012, taking into account if it was a SENA instructor that gave the workshop. In accordance with this methodology, the interest coefficient in the evaluation should indicate the impact that the workshops had on students who were part of the treatment group.

Table 10 shows important differences between the students that are believed to have participated in the workshop (information that was collected from the attendance lists) and the students who should have participated in the workshop given they were enrolled in a class where the workshop was given. Within the students' sample, for which there is baseline and follow-up information, the attendance lists indicate that only 96 individuals participated in the workshop, while the class schedules provided by Unipanamericana state that 326 students were enrolled in classes where the workshops were held.

Table 10. Students who attended the workshop vs. students who should have taken the workshop

	Number of students who attended the workshop	Students who were in a class where the workshop was given
Yes	96	326
No	286	56

Source: Fasecolda. Baseline and follow-up survey, workshops.

However, similar to the DID methodology, no significant impact of the workshops under instrumental variables was found. In fact, the impact on the number of risks that students know of disappears and a significantly negative effect on savings habits is found (see Table 11).

Table 11. Impact results of the workshops - Instrumental Variables

Dependent variable	Instrumental variables with fixed effects per individual
Number of risks that they are exposed to	0.189 (0.730)
Number of known insurance products	-0.995 (1.443)
Average knowledge of insurance concepts	1.403 (1.196)
Attitude towards risk and insurance	-0.0708 (0.131)
Perceived capacity regarding knowledge on risk and insurance	-0.0562 (0.137)
Savings	-0.874* (0.529)
Savings for emergencies	-0.158 (0.268)

Dependent variable	Instrumental variables with fixed effects per individual
Number of insurance products purchased in the last six months	0.0260 (0.266)
Interest in buying insurance	0.416 (0.414)

Standard errors in parentheses. (***) $p < 0.01$, (**) $p < 0.05$, (*) $p < 0.1$ significance)

5.3. Results of Propensity Score Matching (PSM)

As mentioned in section three, a third impact estimation methodology, commonly used in the literature was implemented: Propensity Score Matching (PSM). This methodology consists of finding a “clone” for treatment individuals in the group of control individuals through statistical methods. In this particular case, the PSM methodology allows for the use of information from those individuals who were part of the treatment group but were not interviewed at baseline.

Table 12 shows the results obtained through PSM, only using the common support region, thus using 430 observations. To match the individuals, variables such as: age, gender, degree, income level, if they have a car, if they have a motorcycle and occupation, are taken into account. The results show significant and positive effects on four fundamental variables. First, the impact on the number of risks to which the individual is exposed is again positive and significant. This is an important impact, equivalent to a 0.22 standard deviation. However, unlike the DID model or instrumental variables, under PSM results suggest that the workshops also had an impact on three additional variables. In the case of the number of insurance products known by the students, the effect is a 0.19 standard deviation increase. A positive impact is also seen at the level of knowledge of insurance concepts, with a 0.3 standard deviation increase. And finally, a positive impact on the participants’ perceived capacities (0.21 standard deviation) is also found.

Table 12. Results under PSM- workshops

	Number of risks that they are exposed to	Number of known insurance products	Average knowledge of insurance concepts	Attitude towards risk and insurance	Perceived capacity regarding knowledge on risk and insurance	Savings	Savings for emergencies	Number of insurance products purchased in the last six months	Interest in buying insurance
Attended the workshop	0.182** (0.0808)	0.331** (0.165)	0.454** (0.178)	-0.0238 (0.0151)	0.0364* (0.0190)	0.0280 (0.0428)	0.0519 (0.0571)	0.0461 (0.0344)	-0.0114 (0.0509)
Constant	1.561*** (0.0385)	2.267*** (0.0788)	3.030*** (0.0846)	0.491*** (0.00720)	0.609*** (0.00903)	0.158*** (0.0204)	0.567*** (0.0272)	0.0879*** (0.0164)	0.261*** (0.0242)
Observations	427	427	427	427	427	427	427	427	425
R-squared	0.012	0.009	0.015	0.006	0.009	0.001	0.002	0.004	0.000

Standard errors in parentheses. (***) $p < 0.01$, (**) $p < 0.05$, (*) $p < 0.1$ significance)

Diverse hypotheses may explain the results found in the workshop component's impact evaluation. First, the study's target population should be taken into account. Being young people who study at night and work during the day, it is possible that the topic and the obligation of taking a financial education workshop were not well received. In fact, there were comments in this regard at the time of the workshop and survey implementation, with students complaining about investing their time in these activities and not in classes they had paid for. Second, the fact that it was necessary to collect the follow-up information through various channels clearly shows that the students were not interested in completing the survey and this could also affect the results found. Third, as college students who are also participating in the labor market, they are a more educated population where the impact of the workshops could be lower.

Finally, given the differing results between the three methodologies it is not clear whether or not the financial education workshop had a positive impact on the knowledge, abilities and attitude of the participating students. It should be highlighted that the evaluation presented here is for a very specific population, not representative of the population that the workshops were originally designed for and therefore these results should be taken with caution. In fact, we suggest that in the future additional evaluations be carried out to estimate the potential impact of the workshops on the overall target population.

6. Conclusions

This study presents the results of a controlled randomized experiment that estimates the effectiveness of the Viva Seguro Financial Education Program in its two components: the radio program and workshops.

Concretely, it estimates how the Viva Seguro Financial Education Program on the radio could affect different variables of interest. The results suggest that Viva Seguro had a positive impact on people's knowledge of the number and type of risks that they are exposed to; the knowledge regarding the amount and types of insurance products available on the market; and also on the individual's perception of their capacities in risk management and insurance. However, no effect was found on their knowledge of specific concepts related to insurance, nor their attitudes towards risks or insurance.

Taking into account the Viva Seguro program structure, where about 50% of the chapters are devoted to the first two issues, these results were to be expected. These are robust under different methodologies, including the instrumental variables methodology which corrects for endogeneity caused by omitted variables, self-selection or measurement errors. It should also be noted that the people who benefited from the radio program, as shown through descriptive statistics, have low education levels and also belong to low-income households. These socio-economic characteristics can also be associated with the positive impact found in the evaluation, as the individuals are part of the originally targeted population group.

It is important to mention the cost-effectiveness of the radio program. A clear policy recommendation is revealed comparing these results with those of other financial education programs taught through different channels: financial education programs on the radio are effective in changing people's knowledge if they dedicate sufficient time to the subject on which you want to educate. It is important, however, to slightly redesign the structure of this program to incorporate greater explanation of specific insurance concepts if it seeks to increase listener awareness on this issue in particular. Similarly, it would be worthwhile to incorporate strategies that also have an impact on the attitude and behavior of listeners, allowing the program to advocate for effective and informed decision-making to manage risks and purchase insurance.

In contrast, the results of the workshop component are less clear. The estimates presented in this evaluation observed no positive impact on the treatment population under the difference in difference and instrumental variables methods. On the contrary, there are positive effects on the knowledge and abilities under the propensity score matching methodology. This implies that it was not possible to achieve clear or accurate conclusions regarding the impact of the workshops offered at Unipanamericana.

As explained above, in the case of the workshops, the evaluation was not based on a representative population, but rather a group of individuals with very particular characteristics. It is necessary to keep in mind that the workshops were initially aimed at people from the first and second social stratum,⁹ beneficiaries of unemployment insurance from the Cajas Compensación. However due to implementation problems of a random experiment with that population group, the Unipanamericana students were chosen. In effect, the students are a more highly educated population, thus it is not surprising that the program had less of an impact with this population group. In addition, it should be kept in mind that in general the results of other impact evaluation studies around the world indicate that it is not easy to increase knowledge and change the attitudes of individuals. It is necessary to design a program in accordance with the characteristics and needs of the target population, something that in the case of these workshops, for the above mentioned reasons, was not done.

9 Translator's Note: The social stratum or estrato are utilized in Colombia to differentiate economic and class structures, as well as access to social benefits. The social stratum are ranked from 1 to 6, with 1 being the lowest income group.

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