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# Financial literacy and individual success: Lebanese framework modeling

Bachir EL Murr<sup>1</sup> Genane Youness<sup>2</sup> Hala Gharib<sup>3</sup> Mayssaa Daher<sup>4</sup>

## Abstract

This paper sheds light on the role the financial literacy features may play amid other determinant factors of individual success. A survey is conducted on a random sample of households' members, based on the individual perception as an assessment criteria of financial literacy status and career success. A non-parametric method, ctree, and a semi-parametric method, the multivariate logistic regression with interaction using random forest, are used. The two models are built to perform supervised learning classifications. They are validated through 10-fold cross validation technique to assure their capability to predict key factors of individual success, among which financial literacy features. It shows that personal and socioeconomic factors do not have any noticeable impact on professional success. Current educational system seems offering light insight on the professional perspectives of individuals. Financial literacy factors seem the major determinants of career success, noteworthy how, when and where are reached. The research work is based on the individual perception as an assessment criterion, allowing only exploratory and non-predictive results. The results coming out show the importance of upgrading individual financial literacy features at least in two directions: first, general education system should be reviewed to be more compatible with business and professional life needs. Second, formation, seminars and conferences for targeted public or mass media awareness campaigns for grand public could form complementary convenient ways to broadcast orientations on healthy behavior in spending, planning, and awareness for personal financial controls. The

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paper is notable by its innovative form of questionnaire which allows to fill in the same manuscript information related to households and their members. It is also distinguished by the conceptual and modeling frameworks, for it is founded on the individual perception as assessment tool of the financial literacy status and career success standing, and for it is based on two stylized models built and tested by advanced methods, allowing classification of the career success determinants. The paper is original as well by the sorted-out results showing the financial literacy features as main factors enhancing opportunities and avoiding difficulties to achieve a successful career trend.

## **1 Introduction**

The financial literacy concept gains sights with time and place (Loutfi & EL Murr, 2018). The major part of writings on financial literacy focuses on its impact on money management, including budgeting, saving, investing, planning and insuring (ANZ Banking Group, 2003; Taft et al., 2013; Ibrahim & Alqaydi, 2013). Some authors limit its area to fundamental mathematical and language literacy (Worthington, 2013), others consider the ability to make informed judgments and to take effective decisions (Huston, 2010, Remund, 2010; ASIC, 2011; McKay, 2011). The highlights are mostly put on the empowerment that financial literacy allows in terms of financial capability.

However, the foremost part of studies undertakes descriptive analysis to illustrate the state of financial knowledge, the behavior of the people when dealing with financial issues related to their life concerns, their job, and their professions, as a way to enlighten the stakeholders strategies and policies. In general, studies take into consideration low and high income countries (OECD International Network on Financial Education, 2012; Aprea et al., 2016), age groups and gender (Lusardi et al., 2010; Cameron et al., 2013; Zokaityte, 2017), firm's size and managerial position (Enlola & Entebang, 2017). In this line, some studies shed light on the benefits of the financial literacy for life wellbeing, for work distress, social inclusion, marital satisfaction (ASIC, 2011; ANZ Banking Group, 2003). Others emphasis the awareness to financial issues

(Taft et al., 2013) and the role of the educational system in the financial awareness and education (ASIC, 2011).

In these regards, financial literacy could serve to apprehend general economic and financial concepts (Van Rooij, Lusardi & Alessi, 2011; Lusardi & Mitchell, 2013), to perform job and make advanced financial decisions like retirement plans and portfolio choices (ANZ, 2003; Van Rooij, Lusardi & Alessi, 2011; Harrison, 2016) or to deal with banks and banking products and operations (Ibrahim & Alqaydi, 2013). It's considered like other forms of human capital (Jappelli & Padula, 2011), allowing to make complex financial decisions (Van Rooij, Lusardi & Alessi, 2011; Lusardi & Mitchell, 2013), to reach a rich array of investment opportunities (Calvet, Campbell & Sodini, 2007), or at least as an assistance way to avoid welfare costs of financial mistakes (Van Rooij, Lusardi & Alessi, 2011; Calvet, Campbell & Sodini, 2007), or financial stress (O'Neill et al., 2006).

On the other side, some studies tried to apprehend the socio-economic impact on financial literacy, expressed through the parental effect, the professional status and domain and the income or wealth level (Lusardi & Mitchell, 2013). In addition, many studies try to define other factors supporting the financial literacy background, underlying that the financial capability may be build up at home (Lusardi et al., 2010), school (Lusardi & Mitchell, 2013; OECD's Program for International Student Assessment PISA, 2012), university (Nidar & Bestari, 2012; Ludlum et al., 2012; Lusardi & Mitchell, 2013); Worthington, 2013; OECD, 2012), or when forging experience in doing life, performing job or managing business, or complemented by financial advice (Porto & Xiao, 2016).

## **2 Problematic**

This paper seeks to identify the role the financial literacy may play, among many other factors, in the matrix of success determinants. In fact, many factors may interfere in determining the success level all along the career path of individuals. Some are related to personal features, educational trajectory, professional profile and social class. Others

are associated to the financial literacy status of individuals, mostly reflected by numeracy faculty and general knowledge in basic economics, banking operations, tax procedures, business and labor law, or by advanced level of qualification in finance, portfolio management, financial products, risk management and retirement planning.

Likewise, the present paper aims to identify the potential determinants of individual success in a small open economy, like Lebanon, where a developed banking sector exists. It purposes to evaluate the impact that has financial literacy and any of the alternative socioeconomic factors on each of the three here considered level of success (outstanding, successful, fair and less), and to scale determinants of each level of individual success by their impact magnitude.

In this context, and on the spotlight of the socioeconomic background of individuals, the problematic of this paper focuses on the interface between financial literacy and career success. It seeks to verify to what extent the efficiency of an individual's financial decision is affected by the financial literacy level? Do groups having different age, gender, religion, socio-economic background, and geographical region have the same success opportunities, regarding their educational and professional profile and financial literacy status? What is the individual profile allowing professional success? Where is the place of financial education in a successful career achievement? Do financial literacy features affect similarly professional success?

### **3 Conceptual framework**

The paper differs largely from others by the undertaken approach to assess the success level. The assessment is based here on practical measure reflected by the individuals' perception regarding the level of their own achievements they themselves convinced having realized all along their life. The adopted approach here is not founded on a theoretical framework looking for optimizing an objective function under rationality hypothesis, like utility maximization from doing consumption, educational, employment, or financial choices. Consequently, the core set of assessment tools usually using criteria like efficacy, efficiency or performance is not built here on a specific indicator or on a measurable index of multiple indicators, but on real perception of the satisfaction

the individual has apropos his own carrier or life. Knowing that individuals are here considered, and not households, firms or states, the choice is made to not use theoretical approach for assessing satisfaction level, but to tackle directly the own insights of individual about the level they attribute to their realizations. An interest has been then accorded to the self-assessment of individuals to their own professional, carrier or life achievements, with regards to socioeconomic and educational factors influencing their daily and long-term choices. Because it's question here of a life path assessment that it's difficult to resume in some indicators, and not a simple evaluation of a retrospective impact of a punctual made decision nor of a prospective effect of a potential forthcoming measure, it's considered that the best person able to grade the value of its life trajectory is the individual himself. Likewise, it's assumed that an individual, already supposed rational, is the only person who can make a judgement regarding the status of his achievements. And, this self-assessment will be made not only with regards to his own convictions about the weight he grades for his attainments vis a vis his expected ambitions and planned program to his life, but also with reference to the standards of the established system of values in the society where he grows up.

## **4 Methodology**

### **4.1 Survey implementation**

For this concern, a survey is conducted, using an innovative, easy to fill and compact form of questionnaire, based on closed responses, allowing to assemble in the same manuscript information on the household level and on the individuals belonging to the household. This allows to apprehend the personal and financial character of individuals living in the same context and to know the level of success determinant factors among generations.

A set of 45 indicators are used to represent the explanatory independent variables mainly related to education, social class, financial knowledge, basic economic knowledge, business information of individuals. The multivariate response variable,

expressing the professional success of individuals, has three levels: "fair and less", "successful", and "outstanding".

The survey is conducted on a random sample of 500 households regrouping a net of 1522 Lebanese respondents, belonging to the different living generations (18<sup>th</sup> till 80<sup>th</sup>). The registered records constitute a huge historical data, related to numerous key variables and corresponding modalities, and form a cumulative intergenerational information among household members that may be used for more than concern.

After cleaning and eliminating the respondents with no professional experience, the remaining database, counting at the end a total of 1274 individuals, is divided into two parts: a training dataset, containing 70% of cases, selected randomly with respect to the levels proportions of the response variable, and a validation dataset set of 30% of cases, used to evaluate and verify the classification quality of the models.

## **4.2 Modeling approaches**

In order to shed light on the consequences of the studied factors on the individuals' personal life and professional success, two stylized models are built based on supervised learning classifications, a non-parametric method: the decision tree, ctree (Horthon, 2007) and a semi-parametric method: the multivariate logistic regression with interaction using Random Forest (Sharma, 2009). To fit the two models, the 10-fold cross validation technique is used on the training dataset.

In such a way, these models allow to apprehend the socio-economic factors forging the financial profile of individuals of the subsequent generations, to predict the determinants of the individuals' financial performance and career success, and to identify the place the financial literacy and socioeconomic features occupies in the matrix of personal and professional achievements for each gender, age group, education field and profession.

#### **4.2.1 Conditional inference tree approach**

The first approach is a recursive extended CART method partitioning algorithm searching for strongest association between the multivariate response and the covariates, and offering an intuitive and computationally efficient solution to the overfitting problem. In each node of conditional inference trees, a significance test for independence between any of the covariates and the response is performed. This approach has the advantage to avoid the need of prune back large initial trees.

Conditional inference tree is applied in the computation simulation environment R using the function "ctree" in the "partykit" library.

#### **4.2.2 Multinomial Regression with interaction according Sharma's approach**

The second approach is the multinomial regression in which interactions between predictors variables are found by Breiman's random forests. Sharma's approach consists on adding the most predictive interactions among variables on the existing logistic regression, enhancing its robustness.

The multinomial logistic regression with interaction using Sharma's approach (Sharma et al., 2009) builds logistic regression with interaction based on random forest variables, and constitutes an important measure of predictive value of attributes. It can be tuned to match or outperform random forest models by adding interaction terms. The random forest algorithm allows learning on multiple decision trees driven on slightly different subsets of data. It shows the position of each variable according to different measurement criteria. This approach is applied in two steps:

- First, select the most predictive factors of professional success by executing the random forest method on all explanatory variables, for they assuring the best Gini index in terms of mutual interaction.
- Second, introduce the picked couple of most interacting variables with all previously tested variables in the logistic regression model. The influence of indicators, resulting



from the multinomial logistic regression model with interaction, is tested by the maximum likelihood test.

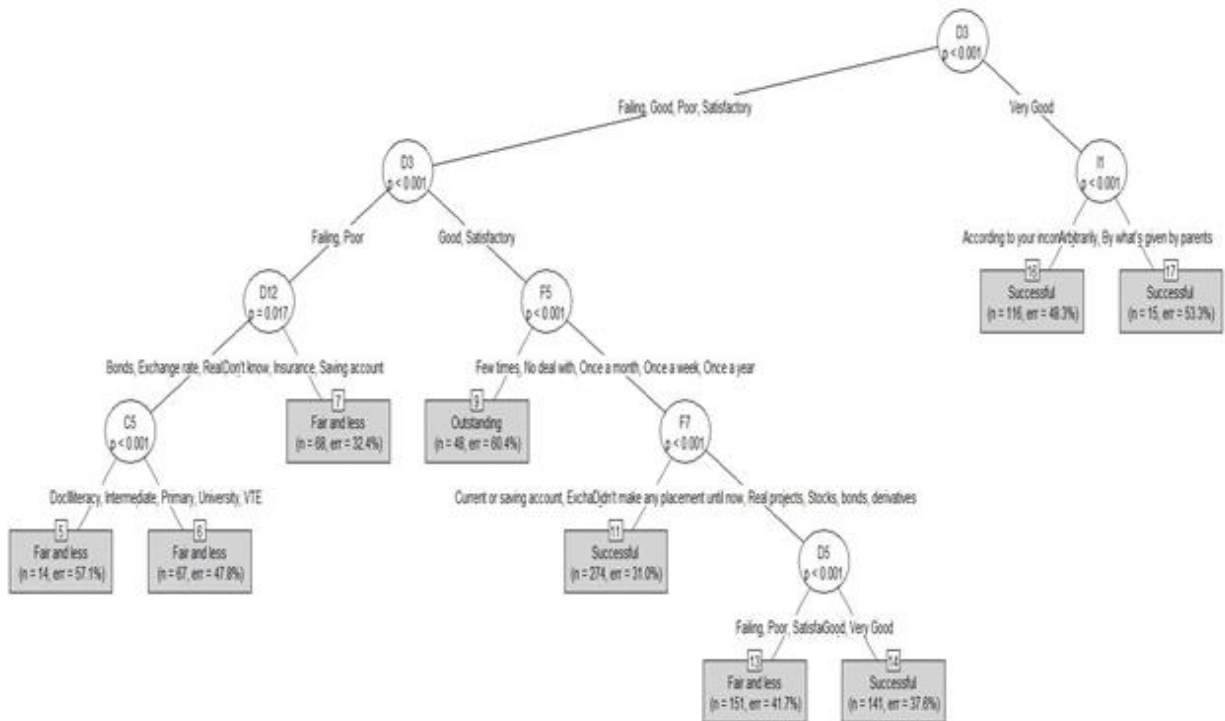
## 5 Results presentation

Results sorted out by the two approaches are here presented and discussed.

### 5.1 Conditional inference tree for professional success

Figure 1 representing the conditional inference tree for professional success shows the business and labor law knowledge at the top of the determinant factors, followed by source of payment, frequency of credit card use, successful placements, and knowledge in banking. Business and labor law information appears as the financial literacy factor imminent and scratching, splitting definitely among professional success levels.

**FIGURE 1.** conditional inference tree



In fact, very good knowledge in business and labor law (D3) assures a professional success whatever is the source of individual expenditure payments (I1, own income or through parents).

In case of good knowledge in business and labor law, non-daily ATM use (F5) for current expenditures seems the second discriminating factor for outstanding professional success. Good professional success in this case is conditioned for daily users of ATMs by making successful placements (F7, current or saving accounts, trade, real projects, financial market operations (stocks, bonds and derivatives) or not making yet any placement), or by holding very good banking knowledge (D5) to succeed in personal or work loans and insurance plans.

In case of poor information in business and labor law, type and level of general education (C5, illiterate, VTE, school, bachelor, master, doctorate) don't neither prevent risky choices (D12, in monetary market (currency) and financial market operations (bonds)), nor influence anymore riskless choices (saving accounts, insurances) from fatal failure.

## **5.2 Multinomial regression with interaction according Sharma's approach**

The results of the multinomial logistic regression are delivered in a table showing the coefficients of the correlation as well as the associated statistics. Given the three levels "fair or less", "successful" and "outstanding" of the response variable, expressing the professional success of individuals, the multinomial logistic regression model with interaction takes "fair and less" as a reference.

Accordingly, the result shows on one hand the coefficients and their significance for the "successful" level, compared to the "acceptable or less" reference mode "fair and less". On the other hand, it shows the odds ratio between an event occurrence probability and that of its non-occurrence. Parameters of "outstanding" level are drawn up with respect to the same reference mode.

$$\frac{P(\text{successful})}{P(\text{fair and less})} = e^{\text{Logit}(\text{successful})} \quad (1)$$

$$\frac{P(\text{outstanding})}{P(\text{fair and less})} = e^{\text{Logit}(\text{outstanding})} \quad (2)$$

$$\text{Then :} \quad P(\text{fair and less}) = \frac{1}{1 + e^{\text{Logit}(\text{successful})} + e^{\text{Logit}(\text{outstanding})}} \quad (3)$$

**Table I:** maximum likelihood test for multinomial logistic regression with interaction

| Variables importance   | LR Chisq | Df | P value     |     |
|--|----------|----|-------------|-----|
| (D3) Knowledge of business and labor law * (G3)<br>Reason of non-preferring saving account | 139.729  | 70 | 0.000001486 | *** |
| (D5) Knowledge in banking  | 34.744   | 8  | 0.00002977  | *** |
| (H5) Short term plan   | 36.312   | 12 | 0.0002886   | *** |
| (I4) Behavior in case of overdraft accounts  | 28.566   | 12 | 0.004568    | **  |
| (I1) Spending  | 18.647   | 6  | 0.004803    | **  |
| (C9) Professional status   | 18.034   | 6  | 0.0061474   | **  |
| (H4) Review the financial situation  | 24.923   | 12 | 0.0151897   | *   |
| (C5) Level of education  | 22.289   | 12 | 0.0344097   | *   |

The most determinant factor of professional success enhancing the accuracy of the model is the interaction of the couple “knowledge of business and labor law” (D3) and “reason of non-preferring saving account” (G3), followed by knowledge in banking, and short-term plan. In fact, it appears that the law knowledge is an imminent factor in decision making regarding saving plans.

Moreover, if an individual is illiterate, he has no chance to access to outstanding professional success, because of the smallest negative coefficient (-17.7) is attributed for analphabetism associated with “outstanding” level of success (cf. Appendix).

An interaction between fail or poor knowledge in business and labor law and non-preference of saving accounts due to “fairness to deal with banks”, “don’t know about saving account”, “difficulty of withdrawals”, “don’t have enough income”, inhibits the chance to reach outstanding level of professional success (coefficients range from -14.53 to -8.53). The level of academic education improves slightly the situation regarding outstanding professional success. It seems that general academic system lacks practical information capable to improve opportunity to reach outstanding professional success (-3.7 to -1.9). Poor or satisfying knowledge in banking constitute a real barrier to attend outstanding professional success (-1.15 to -0.7).

The behavior regarding overdraft accounts presents a slight negative impact on outstanding career in case of selling real or financial assets, buying with delayed payments, stop spending or withdrawing from saving accounts (-0.98 to -0.3). Spending behavior has slight negative impact on outstanding level of success when the person uses what given by parents or spend arbitrary (-0.655 to -0.20). “Reviewing financial situation only when we have to do investment” decreases slightly opportunities for outstanding level of success (-0.25).

However, an interaction between “very good” knowledge in business and labor law and “preference of other financial investments” or “too early to have a saving account”, as reasons of non-preference of saving accounts, will enhance noticeably the opportunity to reach “outstanding” level of professional success or at least allow positive but lower chance to assure “successful” level. Nonetheless, the interaction among non-preference of saving account and knowledge of business and labor law allows individuals “preferring investment to saving accounts” a lower chance for high and outstanding success if they have low knowledge in business and labor law (too small negative coefficient). For those ignoring juridical aspects of business and work, it’s risky to invest. Individuals not endowed with any information regarding saving accounts or are averse

to saving account, the opportunity to succeed in their professional life will be considerably reduced if they are endowed with a poor knowledge baggage in business and labor law.

Good and very good knowledge in banking improve slightly the opportunity to catch outstanding level of success. Behavior regarding overdraft accounts present a slight positive impact on outstanding in case of finding other ways to make up it in using credit cards, or soliciting banking facilities or making decision to extend work to find money (0.08 to 0.23). Planning in spending money allows increase positive condition for outstanding level of success (0.5). The person who has no interest for review financial situation does not comprehend its importance to reach outstanding professional success (0.02) or express negative perception to have successful level professionally. Increasing frequency of reviewing financial situation enhance the chance to attend progressive outstanding professional success (0.42 to 0.98). Monthly regular review allows the highest opportunity to reach outstanding success at least better than daily review which concern usually consumption spending. However, irregular review of financial situation even so shows high level of outstanding success. "Short term planning" is always a positive factor for outstanding and successful level of profession. The person who allows "plan for education" benefit highly from condition improving good opportunities for outstanding success (1.83), it's followed by short planning for irregular expenditures as buying a car, wedding, birth or tourism and trip (0.86 to 1.1). "No short plan" affects positively condition of outstanding success (1.37) but negatively successful professional condition (-0.17).

## **6 Models' validation**

As mentioned above, in order to evaluate the two models, a validation dataset representing 30% of the global data is served to verify the prediction quality of the models.

To assess the classification accuracy of these models, popular validation measures are applied on the validation dataset:

- Accuracy Classification measure,  $AC = (a+d)/(a+b+c+d)$ . (4)
- Error rate,  $(1 - AC)$ . (5)
- Kappa statistics,  $kapa = (AC - pe)/(1 - pe)$ . (6)
- AUC micro-average: micro-averaged ROC-AUC was calculated by stacking all groups, in order to convert multi-class prediction into binary prediction. It aggregates the contributions of all classes to compute the metric average. It is preferable in multiclass classification setup where class levels are imbalanced.
- AUC macro-average: calculate the mean of binary matrix giving equal weight to each class.

Where: a: the number of real non-default correctly classified by the model.

b: the number of real non-default incorrectly classified by the model as default.

c: the number of real defaults incorrectly classified by the model as non-default.

d: the number of real defaults correctly classified by the model.

$$pe = [(a+b)(a+c)/(a+b+c+d)] + [(c+d)(b+d)/(a+b+c+d)] \quad (7)$$

**Table II:** Validation statistics measures

|               | <b>Ctree</b>     | <b>Multinomial logistic regression</b> | <b>Sharma's multinomial logistic regression with interaction</b> |
|---------------|------------------|--|--|
| AUC           | 0.558            | 0.624                                  | 0.629  |
| 95% CI of AUC | [0.506 ; 0.6085] | [0.5728 ; 0.6726]                      | [0.578 ; 0.6777]   |
| Error rate    | 0.442            | 0.376                                  | 0.371  |
| Kappa         | 0.21             | 0.33                                   | 0.34   |
| AUC micro     | 0.75             | 0.779                                  | 0.785  |
| AUC macro     | 0.665            | 0.719                                  | 0.73   |

It appears that all classification accuracy measures indicate that Sharma's multinomial logistic regression with interaction offers the best performance of the model (0.629), the

lowest error rate (0.371), the highest Kappa (0.34), AUC micro (0.785) and AUC macro (0.73) which raise it as the most performant predictive model.

**Table III:** AUC by professional success level

| AUC (in %)  | Fair and less | Outstanding | Successful | Macro | Micro |
|---|---------------|-------------|------------|-------|-------|
| Ctree   | 70.2          | 68.2        | 61.2       | 66.5  | 75.0  |
| Reg log multinomial                                       | 77.1          | 72.7        | 65.8       | 71.9  | 77.9  |
| Sharma's multinomial logistic regression with interaction | 77.6          | 72.5        | 68.9       | 73.0  | 78.5  |

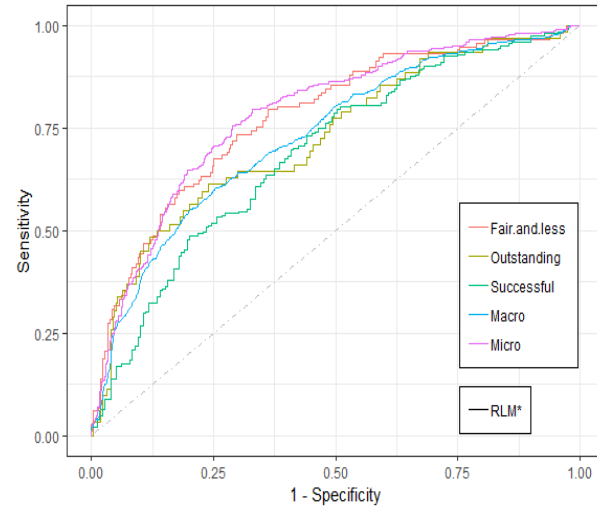
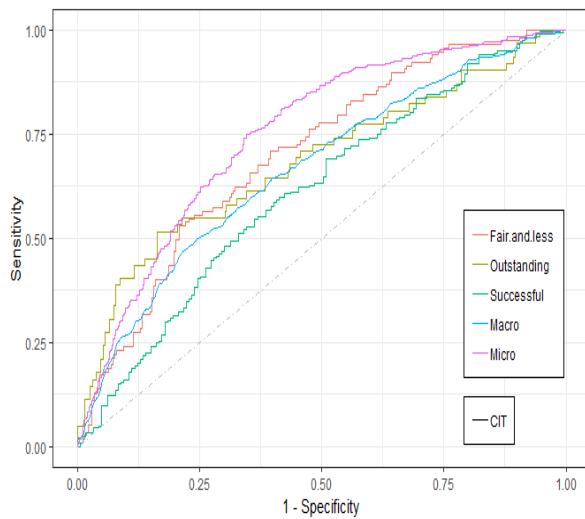
Table III shows the AUC measures of separability. It tells how much models are capable to distinguish between classes.

It appears that Sharma's multinomial logistic regression with interaction is the best predictive model for it allows the highest AUC for all professional success levels, and the best class separation capacity.

Moreover, the highest AUC of professional success levels is registered for the “fair and less” class, expressing the best classifier performance. Individuals with outstanding professional success catch the second order of class separation.

The classification results regarding the performance of the model may be also visualized graphically through Receiver Operating Characteristics (ROC) curves, a valuable tool to evaluate classifiers, plotting true positive rate and false positive rate. In fact, the area under the multiclass ROC curves shows that Sharma's multinomial logistic regression with interaction performs better compared to ctree in terms of accuracy.

**FIGURE 2.** ROC curves for three classes with macro-average and micro-average of classifier for ctree method and Logistic Regression model with interaction.



## 7 Results and discussion

Conditional inference tree approach shows that, among financial literacy factors, business and labor law knowledge is the imminent and scratching factor of professional success, as it fixes professional success or failure. It's directly followed by the ability to plan and later on by banking knowledge. Ability to plan is expressed through dual behavior amid favorites to spend or to place money. Frequent use of ATM states preferences to current expenditures more than for placements in saving accounts or in other banking products or real projects.

Individuals who are poorly endowed by business and labor law knowledge register no more than fair or less level of professional success, whatever are their placement choices and general education level. This is also the case of those who acquired a satisfying level of business and labor law knowledge, but notifying large current expenditures covered by ATM cards withdrawals, absence of successful placement, and poor or just satisfying knowledge in banking operations.

Individuals reporting very good level of business and labor law knowledge, either their expenditures are covered by their own finance or by parents, and those mentioning satisfied level of knowledge in business and labor law, even if they have large current expenditures through ATM, need either successful placement or very good knowledge



in banking operations to register a professional success level. However, those having good or satisfied business and labor law knowledge but reducing or cutting their current expenditures through ATM are allowed to reach an outstanding professional level.

Consequently, factors of professional success seem based on practical knowledge of business and labor law, followed by limiting easy way for current spending (frequent use of cards), successful placements, not to last with knowledge and familiarity with banking operations and accounts.

Professional success seems accordingly deeply conditioned by financial literacy matters, noteworthy how, when and where are reached (since young age through parents at home, general education system, experience). In fact, financial literacy considerations appear for a great matter to professional success at least by two means: first, it allows to know rights, regulations and rules for doing business, work and banking operations in a right way, think that may be foremost acquired during university as business and labor law courses, or later on progressively by practice and self-instruction; second, contemporary issues reiterated from parents experience at home awake long term concerns and shape mode of life by a rational behavior favoring more planning, saving and investing than spending on current expenditures.

Multinomial regression with interaction approach shows that associating saving accounts avoidance, for its limits in offering particular opportunities for success, to good knowledge in business and labor law, push and encourage individuals to undertake riskier and more rewarded ways of wealth and professionalism, improving at the end considerations of self-esteem in terms of career success. Associating conditions of avoiding saving accounts, allowing usually stable income and regular lifepath, and of endowment with information related to business and labor law, allowing to acquire technical basics, forms an incentive for individuals to engage themselves in finding alternatives to invest time and money more prominent to reach talents and wealth. In other terms, be endowed with business and labor law basics, enhancing personal confidence in their capacity to succeed, push persons to find other alternatives than avoided saving accounts, wealthier in terms of talents and money, improving their self-

image of having realized remarkable life achievements. Poor information in business and labor law reduce the appetite for riskier alternatives than avoided saving accounts, cutting the empowerment to assure outstanding level of success. Other general academic materials lack practical information allowing to overpass the barrier of a poor baggage of business and labor rules and regulations to access outstanding level of success.

Hence, general education system should be revisited to offer material closer to business and professional life needs, mainly related to banking and financial operations and practices, as it seems that lacking this kind of knowledge constitute also a noticeable barrier to reach outstanding level of success. General education system should also implement courses rich in advice and good practices for managing banking accounts and in guidance and orientation to adopt healthy behavior helping to overlap critical situation with regards to accounts overdrafts. Also, courses should cover information regarding general rules and regulations.

Complementary measures should also be done to engage informational actions through formation, seminars and conferences for targeted public or mass media awareness campaigns to reach grand public. This kind of activities will help in broadcasting orientations highlighting and advising on healthy behavior in spending, planning for spending, at least for irregular projects and unconventional expenditures, and reviewing financial situation, even if irregularly or not frequently.

## **8 Conclusion**

The aim of this paper is to fix the place the financial literacy may occupy, among many other factors, in the matrix of determinants of professional and career success of individuals.

The paper undertakes distinct conceptual approach to assess the professional success level, based on the individuals' perception regarding their own achievements realized all along their life.

A survey is conducted to highlight features of financial literacy affecting professional success at the spotlight of the socioeconomic and educational background of individuals.

It seems that personal and socioeconomic factors do not have any noticeable impact on professional success. Age, gender, religion, socio-economic background and regional framework don't have role in opening success opportunities. Educational system seems offering light insight on the professional perspectives of individuals. Financial literacy factors seem the major determinants of career success, noteworthy how, when and where are reached.

However, financial literacy features impact differently and with diverse magnitudes the ability for professional success. Be literate in business and labor law appears a key passport for an outstanding career. It should be supported by comprehensive use of current banking tools (ATM) and by a good level of knowledge in banking operations or by a sustainable banking, financial or real placements to succeed in long term plans. Nonetheless, be illiterate in business and labor law may not be make up by type and level of general education to avoid risky choices or prevent even riskless from fatal failure.

Seeking lengthier choices than saving accounts in terms of risk taking is convenient only if associated with good knowledge in business and labor law, which forms basics to extend affairs and professional ambitions in order to reach outstanding situation in terms of talents and money, reflecting dutiful perception of individuals regarding career and life achievements.

Nonetheless, view the scope of the topic, and the nature of the used criteria based on individual perception not on evaluation criteria, the model shows the factors that individuals see important for their professional success. It clears the state of professional success on the light of financial literacy factors.

According to the revealed issue, and with respect to the sorted-out results, efforts should be oriented in two directions to enhance financial literacy background, for it

seems as much important on the eyes of individuals to constitute a main platform for career and professional success.

First, general education system should be reviewed to be more compatible with business and professional life needs. It should implement useful information regarding rules and regulations related to business and labor, as well to banking and financial operations. General education system should also cover orientation courses, rich in good practices for managing banking accounts and in consigs to adopt healthier behavior in terms of current spending, handling banking accounts, planning and of managing critical situation.

Second, formation, seminars and conferences for targeted public or mass media awareness campaigns for grand public could form complementary convenient ways to broadcast orientations on healthy behavior in spending, planning, and awareness for personal financial controls. The end aim is to spread recommendations to behave in a more business-oriented mode of life.

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## Appendix – Coefficients of the logistic regression with interaction.

| Factors  | Outstanding | Successful |
|--|-------------|------------|
| G3 Prefer other financial placements - D3 very good    | 16.27386    | 12.98141   |
| G3 Too early - D3 very good                            | 15.36689    | 11.95384   |
| G3 Prefer investments - D3 good                        | 4.317625    | 2.723675   |
| G3 Prefer investments - D3 very good                   | 4.264934    | 1.517931   |
| G3 Doesn't allow easy withdrawals- D3 very good        | 4.235688    | 1.528688   |
| G3 Fear dealing with banks - D3 very good              | 3.92933     | 0.093456   |
| G3 No enough income - D3 Very good                     | 2.746948    | 0.582945   |
| G3 Don't know about saving accounts - D3 satisfactory  | 2.544978    | -0.65485   |
| G3 Don't know about saving accounts - D3 good          | 2.343858    | 0.321828   |
| G3 Prefer other financial placements - D3 good         | 2.300506    | 0.084124   |
| G3 Doesn't allow easy withdrawals - D3 good            | 2.216268    | 0.445438   |
| G3 Doesn't allow easy withdrawals - D3 satisfactory    | 2.116675    | 0.093025   |
| G3 Prefer other financial placements - D3 satisfactory | 1.935174    | 0.411044   |
| G3 No enough income - D3 satisfactory                  | 1.915736    | 0.229965   |
| H5 To finance education                                | 1.833991    | 0.534822   |
| G3 No enough income - D3 good                          | 1.763816    | 0.070927   |
| G3 Fear dealing with banks - D3 satisfactory           | 1.67872     | -1.03356   |
| H5 To buy appt or house                                | 1.633337    | 0.631815   |
| G3 Too early - D3 Poor                                 | 1.489497    | -0.79881   |
| G3 Prefer investments - D3 Satisfactory                | 1.478087    | 0.26504    |
| H5 No plan   | 1.350176    | -0.17617   |
| G3 Don't know about saving accounts - D3 very good     | 1.339415    | -1.10454   |
| G3 Too early - D3 satisfactory                         | 1.27853     | 0.153689   |
| G3 Don't know about saving accounts - D3 poor          | 1.129037    | -2.71764   |
| H5 To buy a car  | 1.108012    | 0.825119   |
| G3 No enough income - D3 poor                          | 1.010992    | -1.24727   |
| H4 Regularly, monthly                                  | 0.98247     | 0.485722   |
| G3 Doesn't allow easy withdrawals - D3 poor            | 0.979939    | 0.025972   |
| G3 Fear dealing with banks - D3 poor                   | 0.393902    | -2.66278   |
| D5 Good  | 0.299497    | 0.421156   |
| I4 Extend work time                                    | 0.236269    | 0.335628   |
| I4 Use credit card and banking facilities              | 0.086498    | -1.17965   |



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|  |          |          |
|--|----------|----------|
| H4 No interest to review financial situation     | 0.023232 | -0.3634  |
| I1 Arbitrarily                                   | -0.20705 | -0.38755 |
| H4 Only when making investment decision          | -0.256   | -0.6076  |
| I4 Withdraw from saving account                  | -0.29842 | -0.33017 |
| C9 Inactive                                      | -0.44344 | -0.20716 |
| I1 By what's given by parents                    | -0.65597 | -1.41485 |
| I4 Stop spending                                 | -0.65761 | -0.48071 |
| D5 Poor  | -0.71178 | -0.65209 |
| I4 Buy with delaying payments                    | -0.82229 | -0.57174 |
| I4 Sell real or financial assets                 | -0.98338 | -0.28739 |
| C9 Unemployed                                    | -0.99969 | -1.10728 |
| D5 Satisfactory                                  | -1.15524 | -0.60852 |
| X Intercept                                      | -1.62707 | 1.635178 |
| C5 Secondary                                     | -1.92165 | -1.03481 |
| C5 University                                    | -2.07054 | -1.04163 |
| C5 Intermediate                                  | -2.66233 | -1.21274 |
| C5 VTE   | -2.93487 | -1.60532 |
| C5 Primary                                       | -3.72779 | -2.29779 |
| G3 Prefer investments - D3 Poor                  | -8.53519 | 1.813335 |
| G3 Don't know about saving accounts - D3 Failing | -9.60946 | -0.74451 |
| G3 Prefer other financial placements - D3 Poor   | -10.8636 | 0.204909 |
| G3 Doesn't allow easy withdrawals - D3 Failing   | -11.0828 | -2.31721 |
| G3 No enough income - D3 Failing                 | -12.7906 | -1.77215 |
| G3 Prefer investments - D3 Failing               | -14.3867 | -15.8733 |
| G3 Fear dealing with banks - D3 Failing          | -14.5301 | -2.33957 |
| C5 Illiteracy                                    | -17.7284 | -0.90431 |

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