

# Analysis of Perception Levels with Respect to Alternate Education Loan Repayment Plans in India.

Chandu Suresh, Smriti Pillai, Vishnu V Gopal

**Abstract:** On account of high NPA's in the education loan sector specially in the Southern states of India, efforts are being made to mitigate such losses. Countries like US., UK and many facing such problems had introduced income contingent plans to reduce the mounting losses from NPLs. In this paper, an effort has been made to check the viability of such a scheme in India by analysing the perception levels of the youth across financial literacy, risk aversion and future labour outcomes in India towards such alternative education loan repayment style. The results state that the sample is financially literate and expects favourable labour outcomes and have not shown willingness towards the take-up of the new scheme. It is an initial study conducted on a small sample base and requires extensive research on the same to gauge the willingness and if not, why.

**Keywords:** student debt, student loans, Student financial aid, Income contingent loans, higher education financing

## I. INTRODUCTION

At the end of March 2018, the Non-Performing Asset (NPA) to advances ratio increased to 8.15 percent as against 7.33 percent the previous year (Reserve Bank of India). Out of the total education loan outstanding's, around 94.68% are accounted by the public sector banks who are in the verge of selling all the delinquent loans to special purpose vehicles (SPV) (Mathew et al., 2018). Such growing concerns were addressed earlier by the government by modifying the Indian Banks Association's Model Education Loan Scheme thereby extending the repayment period up to 15 years and launching the Credit Guarantee Fund Scheme for education loan (CGFEL) up to Rs.7.5 lakh (Singh et al., 2018). In this paper, we use data from a field experiment with students and also who have just completed their education to understand the factors that influence the new education loan scheme take-up rates in India, emphasising on their expected labour market outcomes, financial literacy and risk aversion. Studies suggest that lab experiments are preferable for hard sciences as they do not change when exposed to such setting but humans do as the nature may be. It was seen from the analysis, that the willingness level has been compared with various conditional variables describing financial literacy, risk appetite and labour outcomes and was seen that willingness has a negative relationship with that of risk and literacy thereby indicating that a risk averse person and a less financial literate person would prefer the new plan because of the benefits involved. The theoretical work by Findeisen et al., (2016) states that the repayment of the loans in fixed amount based on Income Driven Repayment plan (IDR), above a certain income level seems to be socially optimal.

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Also the empirical work by Abraham et al., (2018) suggests the importance of attributing expected labour outcome with that of the IDR repayments thereby emphasising on the types of borrowers preferring the same. In India, knowledge and information is considered as an impetus for a growing economic prosperity and thus the Government of India focuses on development of human capital. While primary education to all has been widened, public funding of higher education is not considered to be feasible. To cover up such escalation in costs, the Indian Banking Association (IBA) had come out with the Model Education Loan Scheme in 2001 to meet the needs of the aspirants. The said scheme was later modified in the year 2007-08, following which banks received many loan applications wherein the same was misinterpreted in various ways due to which amendments thus done were accepted on 26<sup>th</sup> June 2015. The new amendments highlighted the new features of moratorium period being 1 year or 6 months after getting a job whichever is earlier and also having 15 years of repayment period. While EMI is the usual norm for repayment, in times of low salary levels at the start, stepped up instalments shall be taken into account with passage of time (Indian Bank's Association, 2015).

## II. MOTIVATION FOR THE STUDY

The number of educational loan borrowers increased from 1.30 million in March 2008 to 2.56 million by March 2014 at an annual growth rate of 12%, while the amount of educational loans disbursed increased from `198 billion to 551 billion at a compound annual growth rate (CAGR) of 19% during the same period (Jayadev, 2017). The academic year for 2011-12 saw an admission inflow of worth Rs.28.56 million where the amount of loan disbursements for the year was Rs.2.56 (approx. 10%) that suggests that every 10% a student funds his education by means of loan. The State Level Bankers Committee meeting minutes, states that in states like Kerala and Tamil Nadu, the GNPA's was above 10% while the entire delinquency Pan India was at around 7.67% (Care Ratings Report, 2018). The education loans in India are repaid on the Estimated Monthly Instalments (EMI) basis. Similar sort of delinquency problem also persists in United States, and their repayment method was classified under income contingent plan that noticed decline in NPAs. It is seen that in India there is a high mismatch between the cost of education incurred with the income earned (The Hindu Business Line, 2012). The key reason for such high delinquency was that of the IBA model which does not provide any security for loans up to Rs.4 lakhs.

Moreover, there are many reasons that contribute to such delinquencies like that of the repayment being done solely by the individual without seeking help from parents. There are many other factors that affect the delinquency level such as the parent being financially disciplined and proving lesser chances of loan default. An income contingent plan in U.S defines payments on the basis of income earned, thereby reducing pressure on the borrower to repay. Though the income contingent plan faces with issues that the policy makers are continuously dealing with, these flexible repayment plans are implemented in places like United Kingdom, New Zealand, Thailand, Australia (Dynarski,2015). On one side where India follows the standard repayment plan (EMI) for loan repayment and there are mounting NPAs, an effort is done to see how income contingent repayment plan is perceived among the youth.

### III. LITERATURE REVIEW

The income contingent plans are of predominant use in United States. The income contingent plans are repayments based on the income earned over longer repayment periods and anything exceeding that is forgiven (Johnstone,2009). These loans are adopted by only a quarter of the population that reduce the cost of delinquency and cost of collection of debt, though there are many issues that are to be addressed mainly being the unexpected labour market outcome (Stephen et al., 2014). There is also a mismatch with respect to the benefits being reaped slowly and payments due when earnings are less (Dynarski, 2015). The student's willingness to take-up a particular scheme or loan is based on the liquidity available, often linked to the behavioural aspect of over taking the loan (Cadena et al., 2013). This income contingency plan when looked on from behavioural aspect faces some issues namely poor repayment decisions and loan aversion and that the same can be addressed by proper framing effects and mental accounting (Evans et al., 2014). The U.S debt crisis was on an increasing toll with lot of labour uncertainties and creating a moral hazard in the environment that gave rise to income contingent plans to reduce the default rates. Certain incentive measures have been also discussed for honouring loan repayments on time (Lochner et al., 2016). The reasons for high defaults and delinquencies are also attributed towards the borrower's characteristics or the institutions thus enrolled. It is seen that the probability of education loan defaults rises because of the increase in the number of students going for profit schools and community colleges (Looney et al., 2015). Studies also suggest that the default mechanism also depends upon the borrower's profile with less default rates for those enrolled in science or technological domain, getting good grades, being happily married and having no dependent children (Volkwein et al., 1995). Mueller and Yannelis (2017) empirically emphasised on the benefits of Income Driven Repayment plans (IDR) plans. The same has also been considered as an insurance for the ones who are facing financial hardships and hence beneficial because of the long repayment periods (Lacy et al., 2018). Referring the education loan sector scenario in India, studies suggest that the factors that contribute to higher defaults are socioeconomic characteristics of the borrower, their residence or location and also the cost of financing high education. Certain studies state that in order to maintain

good asset quality, new designs are to be decided and not just relying on the same as a priority lending sector, where much focus is to be laid on the small ticket size loans that are unsecured. Gross, Cekik, Hossler and Hillman (2009) have put across factors like: (a) student characteristics, (b) institution category (type, area, educational outcomes etc.); c) level of student debt; and d) students' employment and income and total debt position by means of the study being conducted between 1991 and 2007 (Bandyopadhyay, 2016). There are a few studies that suggest that student loans are negatively associated with financial wellness as high distressed debts affect the latter. But on the other and high college degree indicate better financial wellness as the expectation is favourable (Henager et al., 2018). The financial literacy of the individuals is necessary for making rational decisions and hence Lusardi and Tufano, 2009; tried to ask certain fundamental concepts to gauge the debt literacy levels. Certain studies describe about the risk taking appetite or the risk aversion quotient of an individual that results in the consequences of the final decision made.

### IV. DATA AND SAMPLE

The data has been collected from 208 students and non-students across India to assess the willingness to take up an alternative repayment plan over the standard repayment scheme considering various factors namely, financial literacy, risk aversion, expectation of future labour outcomes and also the perception of students on their understanding of education loans in India. The survey instrument used was similar to the one used by Abraham et al., 2018. The survey instrument was floated by Google forms by using social platforms like WhatsApp, Facebook and LinkedIn. This collection procedure is just a start and could be used extensively for a wider research scope. The financial literacy questions were adopted from the survey instrument used by Lusardi and Tufano (2009)<sup>23</sup> that assesses the literacy level and that the student make choices in line with their literacy level. The risk appetite of the respondents was assessed based on situational constructs presented to the respondents to gauge their risk aversion levels, a factor important to check their willingness to adopt for the new scheme (Abraham et al., 2018; Kuzniak et al., 2015). Labour expectations of the respondents also accounts for estimating their willingness to adopt the new repayment style. Questions relating to their labour outcomes were posed with respect to three time frames (next 1 year, when 30 years old, when 40 years old) (Abraham et al., 2018).

### V. THE KEY VARIABLES:

The dependant variable taken in our study is the willingness to take-up an alternative repayment scheme with the independent variable being financial literacy, risk aversion and expectation of labour. Also variables like understanding of education loans and whether the respondent had taken a loan or not is considered. Scoring mechanism has been adopted where each question is scored based on the scoring methodology- the weighted average method (Ho, 2013). The weights have been assigned to each questions defining the variables taken based on the importance criteria useful for the study.



The questions under each variable are initially given weight and the score formula for each question defining variable used is

$$QS = [AS / MAX(AS)] * 10$$

where QS stands for Question Score, AS stands for Answer score, MAX being the maximum of the Answer score. Then this QS is multiplied with the weights given for all questions. The range is set for each question and the sum is then categorized into binary variables (0,1). In financial literacy, all three questions were given equal weightages with 0.33 and question scores for all respondents were calculated and ranges were set. Respondents getting a value of 1.32, 2.64, 1.7 for all the questions respectively were given 1, others 0. These are then summed to get a value for financial literacy stating any value above 1 is 1 or else 0, thus stating 1 as financial literate and 0 as non-financial literate. Similar mechanism has been used in case of risk aversion variable, where 70% of the weightage is given to the first question and 30 % to the other and following the same methodology above, if the score is 6.6, then 0 or risk averse or else 1 or risk taker. Labour expectations are asked in the form of three different time frames, where much importance of 0.45 is given to the labour expectations of the respondent after 1 year, 0.35 is given for the expectations when 30 years and 0.2 importance towards expectations at 40 years because of the inaccurate far expectations. The final score of 0 (if score > 6) indicates favourable or more labour expectations else 1 that indicates less or unfavourable labour expectations. Willingness to opt for the new repayment scheme or the take up rates by the Indian youth is measured by comparing the same with the standard repayment plan to understand the preferences by the youth regarding the repayment style of education loans. 0.25 weightage was given for the first question and fourth question, followed by 0.3 for the second question and 0.2 for the third question. The 2<sup>nd</sup> question is given more weightage as the respondent who is willing to pay for 20% is the prospective respondent that the designers for this scheme would look out for. If the final score is more than 7.49, then 1 or else 0 where 1 is the willingness shown and 0 is unwillingness shown.

## VI. RESULTS

### Relationships among variables

The bivariate relationship among variables can thus explain the relationship among various variables to check the direction of their correlation.

#### Labour Expectations

By doing a Chi-square test analysis of the categorical variables between willingness to adopt a new scheme and future labour expectations, it is seen that there is no association (0.53) between willingness to opt for the new scheme and labour expectations unlike that of the U.S context.

#### Financial Literacy

It has been found that there is no proper association between financial literacy and willingness to opt for a new scheme (0.59). In U.S context, financial literacy is considered to be one of the main important factors for assessing the

willingness of the students to opt for the new repayment style.

#### Risk Aversion

Risk aversion variable has a strong association (0.013) with the willingness to opt for the new scheme by means of Chi-square test. It has a strong association in both U.S and Indian context thereby the risk quotient playing a very significant role.

#### Survey Response classification

The data shows that out of the total 208 respondents, 116 are male, of which 74 are risk averse (63%) and 42 are risk takers (36%), while 56 are risk averse (60%) and 36 are risk takers (39%) in the female category. Both men and women from the sample taken are comparatively financial literate having a high percentage of financial literacy in the high qualification degree having major portion from Business Stream. The labour expectations by the sample is favourable i.e. having more labour expectations and thus the likelihood of adopting the new repayment style is less for the ones having high labour expectations. Respondents who don't have financial literacy, chances if preferring the new repayment style is less. Same is the case for a financial literate person, where 27% of the male respondents and 23% of the female respondents have shown willingness towards adopting the new repayment style. Irrespective of whether the education loan is taken or not, the respondents mostly have a neutral understanding of the existing loans in India, around 57%. 13% of the respondents who have taken loan and 26% of the non-loan takers have neutral view. The education loan taker consists of around 28% of the respondents of which, 33% are willing to adopt the new repayment style (Table 1.0). The same when, was analysed with respect to respondents' perception of understanding education loans, more of neutral view of understanding was exhibited. When compared the above with that of financial literacy, it is seen that 25% of the financial literate respondents are willing to adopt where as in case of non-financial literate respondents only 2 out of 11 are willing to adopt from the given sample (Table 2.0). Willingness to take up a new repayment style accounts for 25% of the respondents with many of them opting to not prefer the new repayment style. When compared across with the financial literacy level, it is seen that, respondents who are more financially literate exhibit hesitance in adopting the same and non-financial literates forgive the benefit thereby received. The reason can be attributed towards the fact that in case of income contingent plans, one ends up in paying more than the standard repayment plan (Mathew et al.,2018). Considering the risk averse category that accounts for 62.5% of the sample. From the entire sample, the subset risk averse and not willing accounts for 50% and the subset non-risk averse (risk takers) and not willing to take the new repayment style is around 24%. With respect to the willingness to adopt the new style, both risk averse and risk takers account for an equal portion of 12% in the sample (Table 3.0).



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Respondents having less labour expectations and who are willing to adopt the new scheme accounts for 21% of the less labour expectations subset and 3% of the sample taken. On the other hand, the respondents with high labour expectations and that who are not willing to adopt to the new repayment style is 21% of the sample. Respondents with low labour expectations and that who are not willing to prefer the new repayment style accounts for 14% of the entire sample (Table 4.0). The region wise comparison has been made with respect to labour expectations and financial literacy. Out of the total 164 financial literate respondents in South region, 78% of them expected future labour outcomes to be favourable and respondents who are not so financially literate expect favourable labour outcomes in the future in South region. East region also exhibits the same in the non-financial literate subset, where the respondents believe favourable labour expectations thereby showing high levels of confidence level with respect to labour outcomes. (Times of India, 2018, November 28). In the south region, around 40% of the respondents are risk takers with the remaining set as risk averse followed by risk takers at 35% of the respondents in the East region with other regions more inclined towards the 'Risk averse' subset (62.5%). Risk takers, if any, accounts for more in the South region on the basis of sample taken. South region respondents who are willing to opt for the scheme accounts for 19% of the entire sample. North region exhibits willingness at every alternative from the sample.

**Table 1.0: Education loan takers and willingness to adopt**

Count of IDR	Willingness		Grand Total
	Not willing	Willing	
Have you taken any education loan			
No	116	32	148
Yes	40	20	60
<b>Grand Total</b>	<b>156</b>	<b>52</b>	<b>208</b>

**Table 2.0: Financial Literacy and Willingness**

Count of IDR	Willingness		Grand Total
	Not willing	Willing	
Financial Literacy			
Not Literate	9	2	11
Literate	147	50	197
<b>Grand Total</b>	<b>156</b>	<b>52</b>	<b>208</b>

**Table 3.0: Willingness to adopt new style and risk aversion**

Willingness	Risk		Grand Total
	Risk averse	Not risk averse	

Willingness	Labour expectations		Grand Total
	More labour expectations	Less labour expectations	
Not willing	105	51	156
Willing	25	27	52
<b>Grand Total</b>	<b>130</b>	<b>78</b>	<b>208</b>

**Table 4.0: Willingness to adopt new style and labour expectations**

Willingness	Labour expectations		Grand Total
	More labour expectations	Less labour expectations	
Not willing	126	30	156
Willing	44	8	52
<b>Grand Total</b>	<b>170</b>	<b>38</b>	<b>208</b>

## VII. POLICY IMPLICATIONS

Further research is still needed to have an exhaustive search on the variables as well as the nature of the relationship that the variables create towards the willingness to take up the alternative repayment style. Considering the sample, mixed reactions are being inferred and hence further research is required to have an intensive investigation on the same.

## VIII. CONCLUSION

IDR or the income contingent payments are being preferred by the non-financial literates and it is seen that though South is considered to be a literate demographical region (Schweiger, 2013), respondents are a bit willing to look in for the new scheme but at a lesser degree than Northern Region thereby requiring an exhaustive search further backing the said pilot survey. Major chunk of the sample being more of students currently studying and completed are financially literate and have favorable labour outcomes and willingness is less because of the greater amount of costs involved therein. A detailed research is thus needed.

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