HIGHER EDUCATIONAL FINANCING – A UTILITARIAN APPROACH

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ABSTRACT. As a gate pass to a successful career, the educational loan, ideally, should bring utility to economically weaker students. The present study attempts to develop a Structural Equation Model (SEM) for educational loan utility, which springs out of job prospects from the basic factors, namely awareness, adequacy, utilization, effectiveness, and perception of loan financing on the one hand, and defaults in repayments, on the other. The study is posted to an uneven premise of a popular assumption among loanees that education loan is more of an aid and less of a retail product. The proposed model can decipher the research paradigm by delineating how different factors contribute to derive the utility of educational loans. The model articulates a strong tenet that job prospects (precisely with skills gained) and repayment (financial behavior) are the two core elements for the sustainability of the education loan scheme. The present study signifies the need to develop a standardised tool for the selection of potential candidates to assess their employability quotient to improve the quality of financing and is placed in the range of demand-side perspectives of educational loan financing.

1. INTRODUCTION

Education loans have become a buzzword in all the corridors of higher education and policymaking forums. The idea of education loans is envisaged to provide solace to economically disadvantaged meritorious students who deserve higher education, thereby playing a key role in ensuring inclusive growth and empowerment of human capital. In India, the shift from the Nehruvian planning model, which is premised upon public equity has given rise to the growing importance of private participation in higher education, with its share increasing from time to time. Due to budgetary constraints in supporting higher education, demand-side financing is evolving globally as a viable alternative to public funding.

Unlike supply-side financing, which focusses solely on aggregates, demand-side financing caters to specific needy students. In its genesis, an educational loan scheme is thought to be an effective tool for funding higher education. The government scrapped the erstwhile National Education Scholarship (1963 -1991) in India due to escalating non-performing assets (NPA) and the financial crisis. The new Educational Loan Scheme introduced in 2001 in India has expected to deliver finance to those economically backward meritorious students who otherwise cannot think of higher Education. Educational loanees of the current scheme in India are expected to derive equitable utility from educational loan financing.

The Educational loan utility is a measure of the loan's ability to allow the pursuit of higher education, and as a result, a job that pays well enough to cover the loan's deferred payments.

The present study is conducted in the context of a persistent rise in NPA and media hype for the waiver of loans against the myth of soft lending, which are all detrimental to the health of the country's banking system (Geetharani, 2009). The study aims to propose a model for the utility of education loans based on the understanding that there is a structural relationship between basic factors and utility through job prospects and repayment; default and recovery.

A study of the demand angularity in the given space and time with a such scale makes it a hitherto attempt. Besides, the efforts to choose items from cross-cultural contexts in demand side perspectives give an edge over the like-framed academic endeavors. The study is configured in four sections: Section 1 deals with the review of relevant literature made for the purification of the items for measuring constructs, and to develop a theoretical framework for the study. Section 2 spells out the objectives and the adopted methodology of the study. Section 3 discusses the output of Confirmatory Factor Analysis (CFA) for testing the validity of the measurement model, as well as the results of the Structural Equation Model (SEM) and the model fit summary. Finally, section 4 delves into the conclusions drawn from the preceding analyses and the policy implications of the findings.

2. Literature Review and Item Purification

Despite flaws in the educational loan schemes, it has a far-reaching impact on the country and its youth (Woodball, 1986). The abundant potential of the Indian young population, with an average age of 29 years and accounting for 28 percent of the global workforce, can have a sustainable 30-year future compared to the rest of the world's graying population (Tapiawalah, 2017). Tilak observes that student loans may indeed be a deterrent to the growth of higher education. Despite the virtues of education loans for higher education and youth, loanees often see it as a boon in the early stages and find it as a struggle with a heavy financial burden later (Ufert, 2015). For many, it may seem like an elephant in the room. Looking at the issue with a pragmatic view, awareness, adequacy, utilisation, effectiveness, and perception of loan financing: the basic tenants of loan financing bear a positive correlation inter se and are very sensitive to loanees' profile (Jithendran, 2020). The present study addresses issues of loanees and sees whether these issues could be traced as a path to yield utility for them on a structural dimension.

The different constructs in the proposed structural model were measured using items sourced from the literature after the required adaptations (Table 1). Each construct is chosen to capture the precise opinion on a five-point scale with an optimum number of items purified after several relevant statistical confirmations. Items are selected to throw lights on exact angles to encompass the insights from respondents.

Table 1: Literature Reviewed and Items Selected			
Sl. No.	Constructs	Items	Source
1	Awareness Level	12	McGuigan, McNally & Wyness, (2012)
2	Adequacy of financing	6	Chung (2003)
3	Utilization	7	Johnstone (2003)
4	Effectiveness of financing	8	Albrecht and Ziderman (1993)
5	Perception of loanees on loan financing	7	Abu Baker et al. (2006)
6	Job prospects of loanees	6	Betts, J. R. (1996)
7	Repayment options	7	Shen & Ziderman (2008)
8	Default on Repayment	7	Shinde (2014)
9	Recovery of loans	6	Shen & Ziderman (2008)
10	Subsidy of state	6	Shen& Li, (2003)
11	Loan utility	6	Garcia-Penalosa & Walde (2000)

3. Objectives and Methodology

The study aims to propose an Educational Loan Utility model based on the perspectives of educational loanees of commercial banks in Kerala. It also aims to reveal the extent of the effect exerted by various factors on loan utility.

By design, the study is descriptive and analytical based on primary data. The study population is limited to the professional courses of tertiary education and includes educational loanees who availed loans from commercial banks in Kerala and completed their degree or postgraduation studies before the year 2017-18 and elapsed a period of one year. A multi-stage random sampling method was applied to select the samples. In the first stage, the state of Kerala is divided into three zones, grouping 14 revenue districts into North, Central, and South. Based on the reports of the State Level Banking Committee (SLBC), one district was selected from each zone, and they were Kozhikode from the north, Ernakulum from the central, and Alappuzha from the south zone. Banks in the public sector, private sector, and new generation sector (New private sector banks) were located based on their distribution. Accordingly, 18 branches of public sector banks, 9 branches of private sector banks, and 3 branches of new generation banks were selected, based on the amount of loan disbursed. Subsequently, 7 loanees were randomly chosen from each of the 30 branches in every selected district, forming 210 loanees for each zone and 630 for Kerala.

Data were collected using a structured interview schedule with 11 constructs covering statements on a five-point Likert scale after ensuring reliability and validity by piloting among 50 loanees. The Cronbach's alpha values of all the items for various constructs exceeded the recommended threshold of 0.70 and confirm the reliability of the measurement scale (Nunnally& Bernstein, 1994).

3.1. **Confirmatory Factor Analysis (CFA).** The eleven constructs of the study were captured with a set of statements on a five-point Likert scale. The CFA was performed to ensure that the identified factors are relevant and fit for SEM (Table 2).

Table 2: CFA for Educational Loan Utility Model									
Constructs	Chi-sq.	Df	Chi-sq./df	GFI	AGFI	NFI	CFI	RMR	RMSEA
Awareness level	165.413	50	3.308	.416	.310	.942	.953	.515	.079
Adequacy	3.772	2	1.886	.998	.979	.996	.998	.023	.038
Utilisation	43.237	12	3.603	.981	. .956	.913	.934	.048	.064
Perception	32.870	10	3.287	985	.958	.936	.954	.060	.060
Effectiveness	55.939	15	3.729	.964	.913	.921	.932	.068	.073
Job prospects	17.272	5	3.454	.968	.936	.952	.955	.035	.041
Repayment	10.348	7	1.478	.995	.982	.992	.998	.031	.028
Subsidy	4.874	4	1.219	.997	.987	.987	.998	.033	.998
Utility	10.838	4	2.710	.994	.971	.983	.989	.031	.052
Default	40.390	12	3.366	.932	.921	.964	942	.078	.040
Recovery	6.793	3	2.264	.996	.975	.983	.990	.009	.045
Suggested values			<5.00[1]	>0.90[2]	>0.90[3]	>0.90[4]	>0.90[5]	<0.08[6]	<0.08[7]

[1](Hair et al.,1998)
[2](Hu and Bentler, 1999)
[3](Hair et al. 2006)
[4](Hu and Bentler, 1999)
[5](Daire et al., 2008)
[6](Hair et al. 2006)
[7](Hair et al. 2006)

df= Degree of Freedom, GFI= Goodness of Fit , AGFI=adjusted goodness of fit index , NFI=Normal Fitness Index, RMR= Root Mean Square Residual, RMSEA=Root Mean Square Error of Approximation

All the indices for each construct conform to the suggested values, indicating that the chosen constructs are appropriate for the study.

3.2. **SEM for Educational Loan Utility.** The study developed a structural equation model for the utility of educational loans that depicts the relationship between contributing factors. (Figure 1).

3.2.1. *Exogenous and Endogenous Variables in SEM.* The observed exogenous variables for the study include basic factors, namely awareness level, adequacy, utilisation, perception, effectiveness, and a separate factor subsidy. Awareness level provides the input needed to make a rational judgment when deciding to take advantage of an educational loan. The levels of awareness of the loanees are measured based on their knowledge of the contractual, legal, financial, and technical implications of an educational loan. The adequacy of financing is expressed in terms of a set of statements reflecting the ability of educational loans to meet the financial requirements of higher education. Utilisation denotes the potential of the loan amount to meet the different financing needs of higher education subject to the terms of the lending agency. The perception of loanees about loans charaEcterises how loanees perceive loans for financing, repayment, priority in decision-making, and beliefs. Effectiveness is viewed as the ability of an educational loan to present itself as a better financing alternative in terms of opportunity cost, time, cost of funds, services, and financial flexibility. The subsidy is given as encouragement to repay on time and to facilitate the social targeting of incentives for those who need the most. It covers aspects like need, economic conditions, and pro-subsidy arguments.

Job prospects, repayment, default, recovery, and loan utility are the observed endogenous variables used for the study. The job prospects represent better career options and indicate the economic strength for the repayment of the loan. Salary size, job quality, career opportunities, and EMI-deducted salary balance are all factors considered for job prospects. Repayment as an outgrowth of job prospects covers the sources of repayment, the pressure to repay, and the legal arbitration. Default is the result of a negative turn of events, such as not paying bank dues for more than three months. Recovery is an outcome of default and includes all the means and measures taken by the bank to recover the dues from the loanees. The loan utility is the ability of educational loans to facilitate higher education, a better career, self-reliance, and an improved standard of living for loanees.
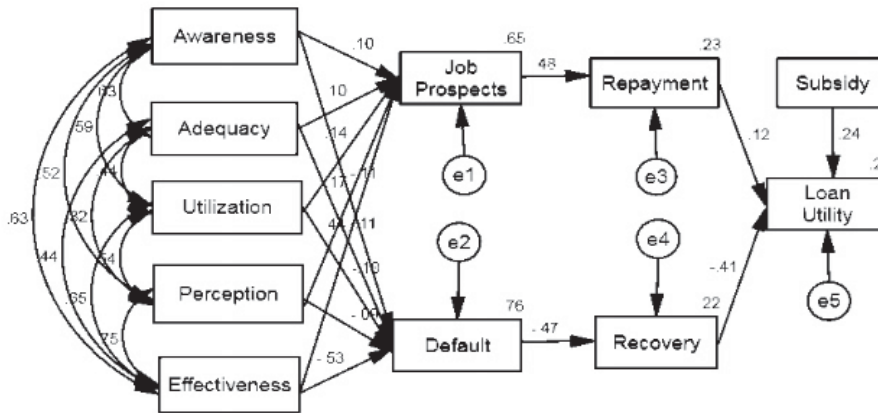

Figure 1: SEM Model Based on Standardised Coefficients in Educational Loan Utility

The unobserved exogenous variables include the error term for job prospects (e1), the error term for default (e2), the error term for repayment (e3), the error term for recovery (e4), and the error term for the loan utility (e5). Therefore, the number of variables in the SEM is

Number of variables in the model:	16
Number of observed variables:	11
Number of unobserved variables:	05
Number of exogenous variables:	11
Number of endogenous variables:	05

Theoretically, all the basic factors have a positive effect on loan utility by positively affecting job prospects, which, in turn, repaying. On the contrary, basic factors have a negative effect on loan utility by negatively affecting default, which in turn, recovery.

4. Data Analysis and Discussion

The unstandardised path coefficients show the effect of various exogenous variables on endogenous variables, as depicted in SEM. The standardized path coefficients are used to compare the extent of these effects (Table 3).

Table 3: Variables in the SEM Analysis							
Variables			Unstandardised coefficient (B)	S.E. of B	Standardised coefficient (Beta)	t-value	p-value
Job prospects	<—	Awareness	.059	.022	.098	2.710	.007
Job prospects	<—	Adequacy	.130	.039	.102	3.329	**
Job prospects	<—	Utilisation	.247	.056	.145	4.419	**
Job prospects	<—	Perception	.328	.031	.437	10.585	**
Job prospects	<—	Effectiveness	.188	.039	.175	4.848	**
Default	<—	Awareness	-.093	.026	-.107	-3.545	**
Default	<—	Adequacy	-.199	.047	-.108	-4.259	**
Default	<—	Utilisation	-.436	.067	-.178	-6.513	**
Default	<—	Perception	-.146	.047	-.094	-3.127	0.002
Default	<—	Effectiveness	-.578	.037	-.534	-15.555	**
Recovery	<—	Default	-.156	.012	-.470	-13.184	**
Repayment	<—	Job prospects	.556	.041	.476	13.591	**
Loan utility	<—	Repayment	.093	.027	.121	3.396	**
Loan utility	<—	Subsidy	.211	.031	.240	6.814	**
Loan utility	<—	Recovery	-.751	.066	-.407	-11.431	**
** Significant at 1% significance level							

Except for awareness, which is significant at the 5% level with a p-value of less than 0.050, the coefficients of all variables awareness, adequacy, utilisation, perception, and effectiveness on job prospects were positive and statistically significant at the 1% level as p-values are less than 0.01. It shows that all these variables have a significant positive effect on job prospects. The unstandardized coefficient of awareness, adequacy, utilization, perception, and effectiveness on job prospects represent their partial effect on job prospects when other path variables are kept constant. From the positive signs of unstandardized coefficients, it can be inferred that the job prospects will increase by 0.059, 0.130, 0247, 0.328, and 0.188 for each unit increase in awareness, adequacy, utilisation, perception, and effectiveness. Perception is the most important variable that influences job prospects, as it had the highest standardized coefficient value (0.437) among all the variables.

The coefficients of all the variables awareness, adequacy, utilisation, perception, and effectiveness on default were negative and statistically significant since all their p-values are lower than

0.01 except for perception whose p-value is less than 0.050. It shows that all these variables have a significant negative effect on default. The unstandardized coefficient of awareness, adequacy, utilisation, perception, and effectiveness on default represent their partial effect on default when other path variables are kept constant. The negative signs of unstandardized coefficients indicate that default will decrease by -0.093, -0.199, -0.436, -0.146, and -0.578 respectively for every unit increase in awareness, adequacy, utilisation, perception, and effectiveness. Based on the highest standardized coefficient value (-0.094), perception is the most important variable that influences default.

The coefficient of default on recovery was negative and statistically significant at the 1% significant level as the p-value is less than 0.01. It shows that default has a significant negative effect on recovery when other path variables are kept constant. From the negative unstandardized coefficients value (-0.156), it can infer that recovery will decrease by 0.156 units for every unit increase in default.

The coefficient of job prospects on repayment was positive and statistically significant at a 1% significant level, since the p-value is less than 0.01, indicating that job prospects have a significant negative effect on repayment when other path variables were held constant. From the positive unstandardized coefficients value (0.556), it can infer that repayment will increase by 0.556 for every unit increase in job prospects.

The unstandardized coefficient of repayment on loan utility (0.093) represents the partial effect of repayment on loan utility, retaining other path variables constant. The positive and statistically significant coefficient value indicates that repayment has a significant positive effect on loan utility. That is, loan utility will increase by 0 .093 for every unit increase in repayment.

Keeping the other path variables constant, the unstandardised coefficient of subsidy on loan repayment (0.21) shows a significant effect on loan utility. The positive sign denotes the effects in such a way that for every unit increase in loan subsidy, the loan utility would increase by 0.21.

The unstandardized coefficient of recovery on the utility of the loan is -0.751, which represents the partial effect of the recovery of the loan on the utility, keeping the other path variables constant. The estimated negative sign implies that such an effect is negative that loan utility would decrease by 0.751 for every unit increase in loan recovery, and this coefficient value is significant at the 1 percent level.

Based on standardised coefficients, job prospects on repayment (0.476) is the path most positively influencing in this SEM model on loan utility followed by the perception of job prospects (0.437). On the other hand, the effectiveness on default (-0.534) is the path most negatively influencing the SEM model followed by the default on recovery (-0.465).

4.1. **Model Fit Summary.** The following null and alternative hypotheses were framed to evaluate the fit of the model, and several indices were determined to assess the fit of the model (Table 4).

Ho: The hypothesized model is a good fit

Ha: The hypothesized model is not a good fit

As the p-value (0.104) is greater than 0.050, it did not reject the null hypothesis that the model is a good fit. This implies that the data fit with the theoretical model and that the proposed relationships between variables are established. All the calculated model fit indices were also in conformity with the recommended acceptable values. The values of the Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI)), Normal Fit Index (NFI), and Comparative Fit Index (CFI) are greater than 0.9, which also endorses the goodness of fit. Moreover, the Root Mean Square Residuals (RMR) value of 0.064 and Root Mean Square Error of Approximation (RMSEA) value of 0.053, which is less than 0.080, support the model's perfect fit.

Table 4: Model fit Indices		
Indices	Value	Suggested value
Chi-square value	103.174	-
Df	30	-
p-value	0.104	>0.05 (Hair et al. 1998)
Chi-square value/DF	3.439	<5.00 (Hair et al. 1998)
GFI	.942	>0.90 (Hu and Bentler 1999)
AGFI	.923	>0.90 (Hair et al. 2006)
NFI	.984	>0.90 (Hu and Bentler 1999)
CFI	.942	>0.90 (Daire et al. 2008)
RMR	.064	<0.08 (Hair et al. 2006)
RMSEA	.053	<0.08 (Hair et al. 2006)

5. CONCLUSIONS

The observed exogenous variables referred to as the basic factors in this study, such as awareness, adequacy, utilisation, perception, and effectiveness on loan financing, are the canons that decipher educational loan schemes. These factors are intricately interrelated and intertwined with the financial behaviour of individual loanees. They influence two specific outcomes depending on the nature of the relationship. The outcome of the positive effect of basic factors is job prospects and, on the contrary, if there lurks a negative influence, the result would be loan defaults. In the former case, repayment emerges, which contributes towards enhanced utility. In the latter case, the contingent recovery process will begin, and then the utility is felt forcefully. Through policy interventions, the government may provide subsidies, and that will lead to increased loan utility.

The study is posted to an uneven premise of a popular assumption among loanees that educational loan is more of an aid and less of a retail product. The model can articulate a strong tenet that job prospects (precisely with skills gained) and repayment (financial behavior) are the two core elements for the sustainability of the educational loan scheme. When considering the model with widely spread sails of basic factors, loanees can experience frictionless repayment compared to the model with weak sails of basic factors, resulting in a bitter financing experience. The parachute model proposed in this study gives a bird's-eye view of the state's entire formal student loan affairs. The model can also be used to assess the utility of other retail lending products of banks in the priority sector by customising the constituent factors. The model signals a win-win situation amidst the trade-off between lenders and borrowers with divergent interests.

6. POLICY IMPLICATIONS

Since the study assesses the loanees' issues in their dimensions, it can throw input on policy implications upon state and banking administration. Basic modules on loan obligation and scheme objectives should be part of the curriculum in threshold courses to improve fundamental factors such as adequacy, awareness, and perception. Similarly, to assess the employability quotient of loanees, a standardized tool needs to be scientifically developed to screen the potentially competent loanees, which would undoubtedly improve the quality of funding compared to the quantity.

Down-the-line communique to the stakeholders of retail loan schemes is on the gravity of loanees' beliefs in Higher Education Financing from the educational loan scheme has many cultural and social linkages with the Indian system of parenting. Therefore, the utilitarian loanees' angularity in appreciating the educational loan scheme is worth reporting.

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