The Economics Society, SRCC

POLICY REPORT

INCOME SHARING AGREEMENTS: FINANCING THE FUTURE OF EDUCATION

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INTRODUCTION

Income Sharing Agreement (ISA) is a concept which was initially proposed by Milton Friedman, an American economist, in his 1955 essay, "*The Role Of Government in Education.*" It is a financing system that provides the recipients a means to pursue their higher education, based on a condition that they agree to pay back a pre-determined percentage of the salary they earn, post graduation, for a fixed duration of time.

In elementary terms, it is an instrument that enables the student to avoid paying tuition fees upfront to the college; rather, the fee is taken care of by the provider of the ISA. The provider is willing to do so in the present (i.e. cover the entire cost or the tuition fee) because she/ he hopes to earn returns in the future (i.e. get a fixed percentage of the borrower's future income).

Given the rising cost of education and the consequent student debt that is accumulating, ISAs are emerging as a viable alternative for financing higher education across developing nations.

Therefore, this report seeks to study the future of Income Sharing Agreements and the possible implications implementing this financing tool in the third largest higher education system in the world, not just in terms of improving accessibility but also in terms of the quality of education outcomes.

DEVELOPMENT OF ISA'S OVER THE YEARS

In the 1970s, Yale University decided to go ahead with an ISA model where undergraduates were asked to pay a certain percentage of their collective income back. The program wasn't a success as it left some students paying much more than their peers who were unable to pay their share.

More recently, establishment of different companies such as the 'Align Income Share Fund', founded in 2011, points to the fact that disbursing ISAs is becoming a lucrative business, especially considering that banks refuse to grant loans to high-risk students. With proper skill development and quality education, students can get high-paying jobs and hence, generate high yields for the fund house. Consequentially, after gaining the interest of the US Congress, a national law regarding supervisions of ISA was initially drafted in 2017. Another program called the 'Pay It Forward Scheme' was implemented in Oregon state. It provided students free college tuition if they agree to pay a share of their future income to the state. The working of this pilot was, in its essence, was geared towards making it a continuous financing option for students in Oregon State, which would ensure that students get through college not paying a single penny for tuition. It would additionally, over the course of a few years, return profits for the investors and the state.

TERMS OF THE AGREEMENT

1. REPAYMENT TERM

The period between the first payment on an obligation and its maturity refers to the repayment term. A major differentiating factor between an ISA and a loan is their respective repayment terms.

It takes about 20 years for an average indebted graduate to pay off her/ his student loan(s), with a current average of $32,731 debt per loan.

Federal student loans can be paid off in 10 years, which equates to 120 monthly payments under a qualified repayment plan. The United State's loan forgiveness program is only open to public service workers — people that work for the government (state or federal) or a qualified nonprofit.

On the other hand the repayment term of an ISA usually ranges from 2 years to 10 years. Therefore, an Income Sharing Agreement seems to be more lucrative as compared to a loan.

2. PAYMENT CAP

It is the maximum amount that one has to pay under an agreement. This contract term may be beneficial for an individual with a well paying job. Since the payment cap is a constant, the funding amount can be paid up much earlier.

This cap is usually in the range of 1.5 to 2.5 times the total funding received. With Purdue University's ISA, for instance, a student won't pay back more than 2.5 times the funded amount, regardless of their income. This means with a 2.5 times repayment cap, the student could end up paying up to $25,000 on a $10,000 amount if they land a high-paying job. Looking at the figures, ISAs can prove to be beneficial here because the individual could end up paying the funding amount much earlier than the maturity date.

3. SALARY FLOOR/ MINIMUM INCOME THRESHOLD

It refers to the Income Level below which payments under an ISA agreement are paused. To protect those experiencing financial hardship, each ISA contract has a minimum threshold specified. This means you do not have to make payments when your annual income is below this amount.

Example :- The minimum income threshold is $40000/year which is equal to $3333/month. This means that the student will not make monthly payments in months during which their earned income is less than this amount. It is the minimum amount that the person should be earning.

Most ISAs also come with salary floors for repayment, meaning the student won't begin paying back their ISA until they're making the minimum income noted in the contract.
E.g.- The coding boot camp Lambda School, for instance, doesn't require payments until your income reaches at least $50,000.

4. GRACE PERIOD

Most programs offer a grace period of at least 2-3 months after the end of a program before ISA payments would begin. This period gives everyone some time to start their job search without worrying about ISA payments or having to report on income immediately. The grace period has a direct impact on an ISA agreement as it leads to an extension of the overall agreement period.

5. DEFERMENT PERIOD

If a student remains below the minimum income after the grace period, the ISA is considered to be in deferment status, meaning students don't make payments and the term of the ISA doesn't yet start. Typically ISAs come with maximum deferment periods of 1 to 3 years. During any deferment period, students make no payments, but the remaining number of monthly payments do not get shorter. If a student remains below the minimum income threshold for the maximum deferment period, then the remaining term begins to get shorter. For example, a student completes a program paid for using an ISA with a 2-year term and a 2-year deferment period. If that student then has an income below the minimum threshold, first the 2-year deferment period will pass, and then the 2-year term itself would pass, at which point the ISA contract would be considered completed.

Sources:-https://digitalworkshopcenter.com/financial-aid/ignite-income-share-agreement/income-share-agreement/

6. REQUIRED PAYMENT

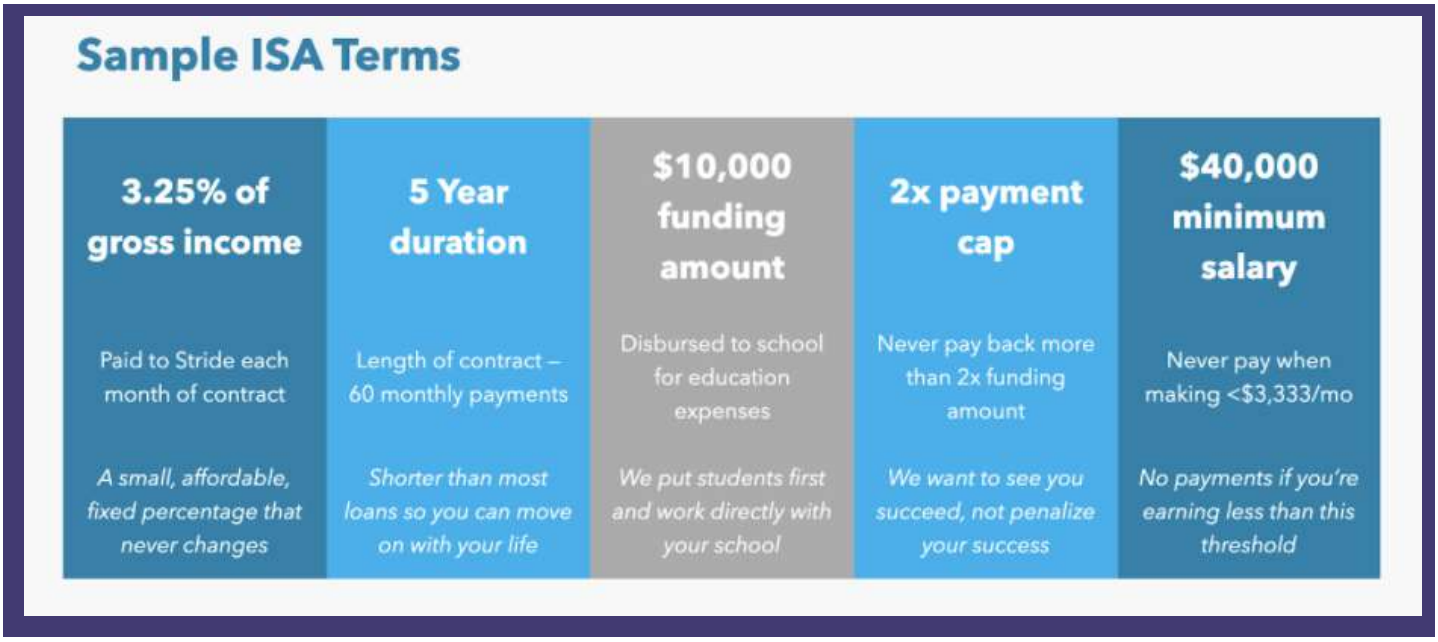
The maximum number of months for which a student is required to make payments, depending on their certificate program. Their obligation is then complete, no matter how much they ultimately paid.

7. WINDOW PAYMENT

Window Payment is the maximum length of time over which the student can make payments. If the ISA payments pause because the income threshold is breached, the student will have to make those payments once they are earning above the threshold. At the end of the payment window the obligation is over, provided the individual's account is in good standing, regardless of how many payments they have made.

8. INCOME SHARE

Income Share refers to the percentage of monthly income a student will share under an ISA agreement. A higher percentage would mean that the funding amount is paid off earlier and vice versa.



SOCIAL FACTORS

IN SEARCH OF EQUITY - WILL ISA MAKE EDUCATION MORE ACCESSIBLE?

THE SITUATION IN THE UNITED STATES

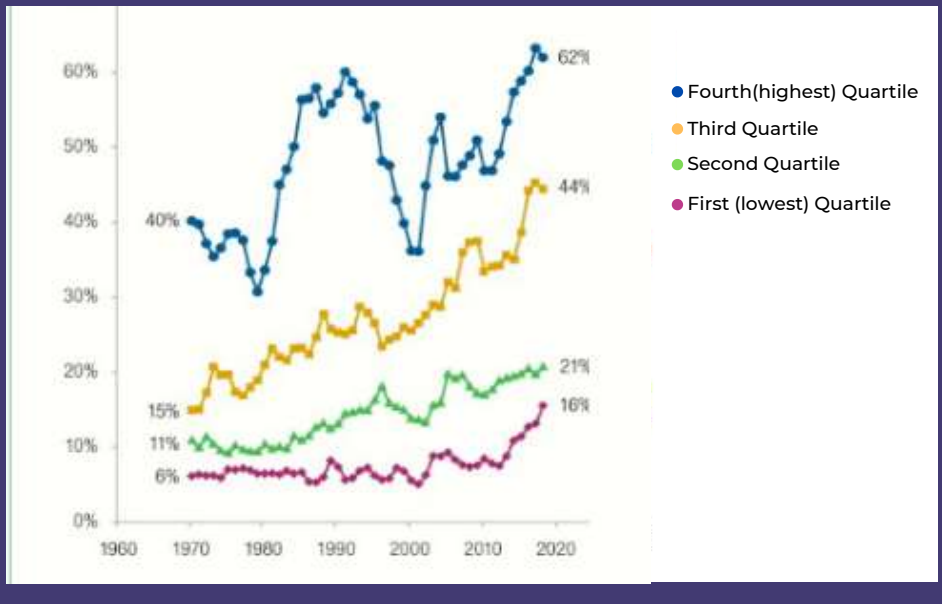
While some progress has been made, closing access, achievement, and attainment gaps between students from low and high-income families and between students of color and white students remains a significant challenge for the nation. According to recent national data, only 22% of African-Americans and 16% of Latinos over age 25 years have earned a bachelor's degree or higher, compared with 36% of Whites and 54% of Asians in the same age group (Ryan & Bauman, 2016).

Only about 15.5% of young adults from families in the bottom income quartile earn a college degree by age 24 years, compared with about 62% of young adults in the highest income quartile (Pell Institute, & University of Pennsylvania's Alliance for Higher Education and Democracy, 2018). Clearly, there remains much work to be done to close gaps in college access and degree attainment by race and socioeconomic status.

A college degree is an essential economic mobility pathway for millions of Americans to escape poverty and ascend into the middle class.

Equity Indicator 5a (i): Estimated bachelor's degree attainment rate by age 24 for dependent family members by family income quartile: 1970 to 2018

Indicator Status: High Persisting Inequality:
Estimated Bachelor's Degree attainment rates by age 24 were 3.9 times higher for dependent family members in the highest income quartile than for those in the lowest income quartile. In 1970, dependent family members in the highest income quartile were 6.7 times as likely as those in the lowest quartile to have a bachelor's degree by age 24.



Without a college certificate or degree, children in families in the bottom income quartile have a 45% chance of remaining there as adults. With a college degree, they have less than a 20% chance of staying in the bottom income quintile (Haskins, Holzer, & Lerman, 2009).

Addressing this challenge is even more critical given that low-income students and students from historically racial and ethnic minority backgrounds will represent the majority of the traditional college degree-seeking population in the years ahead, and many of these students will be the first in their families to attend college. The U.S. Census Bureau (2012) has projected that minorities, now 37% of the U.S. population, will compose 57% of the population by 2060, with the total minority population more than doubling, from 116.2 million to 241.3 million, during the same period. Given these statistics, there is a dire need for private investments and partnerships that expand college affordability for students for whom a college certificate or degree would not be within their grasp without scholarships and support services.

Traditional private loan servicers will only lend to students who have a good credit score, as a result some high achievers are left without an opportunity for higher education since they cannot access capital to finance it with. Private student loans require a **substantial credit and work history**, which has shown to disproportionately rule out low-income and minority students—those who need the financial support the most. To date, ISA models favor a **student's future earning potential over her past** and take into account how education will change her ability to pay her obligation.

This means that more students will be able to get access to financing, which should result in more equal access to credit and good providers.

ISA **carry less risk for students** than private student loans for a couple of reasons, one of which is that risk is shared with funders, which may include the institution itself. The risk of educational investment is transferred, in part, to investors who are better able to pool and diversify investments. This **could help low-income students who are debt-averse** finance their education at a reasonable cost and provide all students with insurance, in the event their investment does not pay off.

ISA also may represent a valuable tool in reducing **dropout rates**. More than one-fourth of students who leave college in their first year report financial concerns as motivating their decision, whether in whole or in part. As such, ISA have the potential to serve as a support for students who would otherwise be forced to discontinue their studies.

This has the potential to channel students into high-quality programs that have proven ROI. Because economic success is a central tenet of the ISA model, investors, whether private or school-backed, rely on students' success to see returns on their investments. It is in their best interest to ensure that they funnel students to, or fund students in, programs that have proven outcomes. Linking funding to program quality could encourage more and more schools to publish outcomes and continually improve the economic prospects of their students. More information about program quality would help investors identify worthy programs and give students the tools to better assess institutional and program quality, and **potentially stem tuition inflation by holding low-quality, high-cost schools accountable.**

Unfortunately, the widespread use of ISA to support the educational aspirations of low-income undergraduates, in particular, may run headlong into the priorities of those offering this type of financing. Returns-minded investors stand a better chance of recouping their investment if they support students who secure the most lucrative careers. A brief history of ISA in the United States suggests that in the main, recipients of ISA have been high-ability students attending prestigious institutions in lucrative fields of study. Unfortunately, stratification within postsecondary education concentrates a sizable proportion of lower-income students in open-access institutions, pursuing sub-baccalaureate credentials. At least on the face, this seems at odds with the notion that ISA could play a significant role in improving college access.

- If ISA were to become widely available to support undergraduate study, under current underwriting criteria, it is estimated that no more than 7 percent of each year's entering, first-time student cohort would likely be eligible to receive this type of funding (about 272,500 students).
- Given past and current practice, the potential of ISA for lower-income students appears even smaller, with no more than 5 percent of first-time, lower-income students likely being eligible for an ISA (about 82,000 students).
- If there were changes to the supply side of the ISA market (that is, if firms were willing and able to follow "low-margin, high-volume" investing algorithms), then students who are likely to earn modest incomes but who have relatively lower funding needs might be targeted for ISA.

Under this generous "upper-bound" assumption, it is estimated that ISA could support up to 14 percent of each year's entering, first-time cohort (about 535,080 students) and up to 18 percent (about 321,450 students) of the cohort of first-time, beginning students who are lower income.

A COMPARISON BETWEEN THE SOCIAL BACKGROUNDS OF ISA TAKERS AND NON-ISA TAKERS

For this purpose, we will be referring to a study that used administrative student-level data from Lumni, which is one of the first ISAs providers in the world, and possibly the largest to date. This dataset includes sociodemographic information, education-related variables, and variables associated with the ISA contract that students were offered.

The proportion of people whose ages are 25 to 29, is higher among ISA Takers (32%) than among Non-Takers (14%). This 18-percentage point difference is statistically significant. These results indicate that Takers tend to have a different age distribution, but that **ISA may be particularly attractive to students age 25 to 29.** The proportion of individuals who are a first child or only child in their families is significantly larger for Takers than Non-Takers. This 16-percentage point difference is also statistically significant.

Two different results stand out on academic performance. First, the proportion of ISA Non-takers is significantly larger among students who earned A's (16%) than among ISA Takers who earned A's (7%).

Second, the proportion of ISA Takers who earned C's (31%) is significantly larger than ISA Non-takers who earned C's (16%). These results indicate that students taking up ISA contracts offered by Lumni (i.e., the group referred to as Takers) tended to have lower academic performance than Non-takers, consistent with the presence of adverse selection.

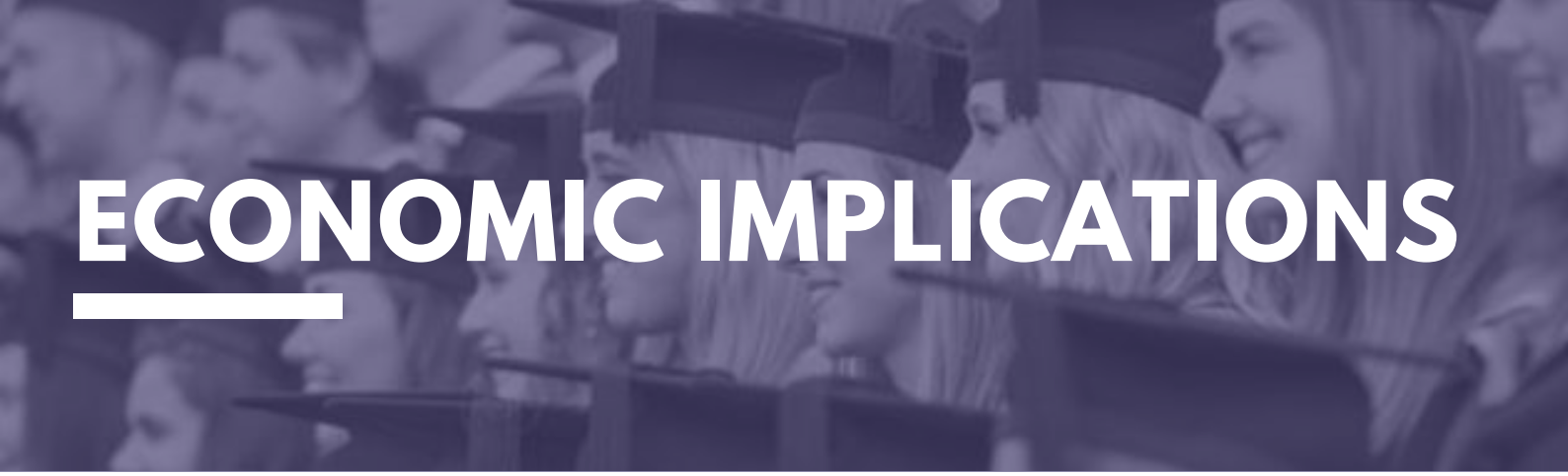
Adverse selection is a threat to the financial sustainability of ISA programs and is a concern for ISA in terms of **equity**. If individuals with lower academic performance select systematically into ISA, ISA investors could make decisions in eligibility criteria to change the pool of eligible students and turn to high performers and high-income students to maximize returns. This action could result in leaving low-income students and minority students, who graduate at lower rates than White and wealthy students, out of ISA programs.

ISA **shift risk away from students.** On average, education pays off. But not everyone experiences an "average" outcome. For many students, especially the million students per year who default on their loans, the cost of their educational experiences isn't worth it financially. Student loans are difficult to discharge in **bankruptcy**, and in traditional loans, the payments are fixed—meaning that students with low salaries may find that they are unable to pay their loans. In traditional loan programs, the risk of poor return on investment is held by the individuals who borrowed to further their education. ISA shift that risk to schools and investors.

For students who experience poor outcomes in the labor market, their ISA payments will fall commensurately with their salaries—and if their income falls below the minimum threshold of their contract, they don't pay at all. This protects students from paying for educational experiences that don't create value for them in the labor market—and it shifts that risk to those on the other side of the ISA contract: schools and investors.

In the context of **skyrocketing tuition and a student debt burden** of stunning proportions, the potential of ISA to shift downside risk away from students offers a compelling value proposition. But ISA offer additional benefits that could have an even larger impact, driving not only affordability but also workforce outcomes. ISA reduce the trade-off between student protection and institutional innovation that arises within pay-for-enrollment models, allowing schools to experiment with inputs while maintaining accountability for student outcomes.

ISA create financial incentive alignment between education providers, capital providers, and students. Unlike the student loan system, wherein schools earn the same amount of tuition revenue regardless of whether a student does well or poorly after graduation, ISA tie the school's fate to that of its graduates, incentivizing schools to teach workforce-relevant skills, offer support to improve retention and completion, and help students navigate the job market. Where the current student loan system promotes access to admission, ISA could **promote access to socioeconomic mobility.**



ECONOMIC IMPLICATIONS

Economists have already arrived at a unison that education will bring enhanced developments in the economy. Various positive externalities like increased tax revenue and consumption expenditure along with better social cohesion, and adaptation of technology are induced into the economy through a rise in the mean level of education. Hence, the initial impact of ISA will be through the effects they bring about in the education levels of the population. However, ISA being a financial instrument will also have macro-level impacts on the economy as a whole when implemented at a large scale.

1. REVAMP FINANCIAL SYSTEMS

The system of ISA is noted to have the potential to fill up certain gaps that exist in the financial aid system. Financial aids available for education at present are largely limited to bank loans, scholarships from the government, NGOs, and other bodies. Walizer (2018) finds that three out of four post-secondary students in the US have faced financial difficulties and unmet financial requirements during their period of study. Students' demand for educational loans has never been met by the existing financial aid system vis, bank loans, which is true even for developing nations. Student loans provided by banks in India have shrunk by 3.5% in 2019.

With the student debts rising to unprecedented levels transcending to be NPAs and total funds available for lending plummeting, the financial aid system is in need to explore larger sources of funds. Here is where ISA can bring in an unexplored source into the financial aid market, acting as a blended model to bring in private capital to a realm of social importance. Unlike bank loans and scholarships, ISA also tap in philanthropic and corporate funds to the system as financial aid.

Along with solving the inadequacy of funds, ISA also fill up disparities in the availability of resources and ensure equitable availability of opportunity. David Walker, the head of Finance at a college in rural Pennsylvania, USA, has pointed out that ISA is a tool that helps them to aid students, who were otherwise unable to afford the tuition fees with mere loans. Thus, ISA when implemented effectively can cover up the disadvantages the financial aid system faces currently.

Philanthropic investors find ISA as an avenue that gives fixed returns, and ultimately incorporate stakeholders into the financial aid system. Many observations already show that increased interest in ISA over the past few years has been driven by FinTech companies, Venture Capitalists, and finance companies who help to outmaneuver the limitations of government aids and bank loans.

2. ASSYMETRIC INFORMATION

ISA is a policy that involves various stakeholders including students, employers, and institutions-both educational and financial. Hence, symmetry and uninterrupted flow of vital information are key for all stakeholders. In the real world, achieving perfect symmetry is impossible.

De Rugy and Salmon have noted that lack of information to students on possibilities and choice of programmes, lead students to underemployment and low graduate earnings. Compared with students, private investors are noted to have better information than students about their future earning prospects and the labor market as a whole. ISA is seen as a reflection of the value a program has in the employment market. The funds available via ISA for a course will be determined by the expectations of the investor and this will help students to inspect the value the job market places on the programme. This will give direct and complete information on the institution, field, and subject of study to the students. The transparency created by ISA will lead students to the best course at the best institute.

It is important for a student to know the various terms and conditions they may be subjected to in the future under ISA. Lack of awareness about these terms of ISA is seen as the prime reason for its weak acceptance among students. For example, the University of Utah in 2018 launched the “Invest in U” programme as a pilot to test the viability of ISA among the students.

The university team noted that communicating ISA to the students was complicated, delicate, and required a series of dedicated counseling sessions, websites, and other communication tools. Though the programme is still running, in its second year, the students were initially hesitant to choose ISA solely due to its novelty and the number of takers for ISA was lesser than predicted. Unsurprisingly, it is often cited that lack of information on terms of repayment and its mechanism is the main cause for student debts rising by over 50% in the past 15 years in the US. It is also due to this reason that the Financial Counselling Association of America has highlighted ‘Commitment to repay, irrespective of the outcome’ as the prime responsibility of a student debtor.

The aftermath of asymmetric information in the student loans segment has already been discussed, hence it is necessary to prevent such an asymmetry between providers and students in the case of ISA.

Though ISA can be said as the harbinger of funds from fields generally unrelated to the education sector, the dissimilarity in contextual knowledge among various sectors is to be considered. Students get benefits out of the funds which may be provided by the investment and private finance sectors. However, those sectors lack intricate knowledge in the historic missteps, landscape, and requirements of the education sector and in particular the students. The most wanting aim while implementing ISA, as a substitute to student loans will be to prevent ISA from becoming another crisis.

3. DISTRIBUTED RISK

Economists believe that risks arise from uncertainty over the prospective economic outcome. This can be quantified as the unpredictable nature of gains and losses. Student debt is infamous for its high and fixed interest rates that are a risk given the uncertainty over his future earnings.

ISA, unlike loans, gives lesser risks to students and distributes a large portion of it among other key players thereby aligning the interests of students with that of their institutes. The students are also aware of the payment obligation and duration of the commitment. Hence, the risk of repayment affordability is completely removed. Also, in case of ISAs students are not required to pay a fixed principle or interest on a regular interval. This transfers the ultimate risk of repayment to the investor or the institution itself. ISAs also cascade students from defaults during periods of low income or no income and minimizes the financial distress. Nobel Prize Economist Kenneth Arrow has noted that the nonexistence of a market that offers the opportunity to transfer risk from one agent to another in the first instance reduces welfare for those who wish to transfer those risks to others for a certain price, as well as for those who would find it profitable to take on the risk at such prices. Arrow's observations can be applied to the higher education market where ISAs enhance student welfare by reducing default risk and enhance investors' welfare by offering investments that offer a profitable return.

4. SLUGGISH GROWTH

The new graduates who come out of higher education institutions, also come with an added obligation to secure an occupation with uniform returns. Even aspiring entrepreneurs most likely take up regular salaried jobs, due to terms of the agreement or to pay off responsibly.

A State Federal Reserves of Philadelphia Research on small businesses shows that the number of firms with one to four employees (the small businesses) reduced by 14% between 2000 and 2010 for an increase of one standard deviation in student loans. It is thus inferred from this that an ISA student who also has a similar financial burden is 11% less likely to begin a new business. The absence of new businesses devastates the economy in the long run as it translates to lower employment levels and economic output, bringing down the GDP growth rate staking the overall productivity of the economy.

It is also seen that a young professional opting for ISA will have a fixed proportion of his salary committed as repayment causing financial inflexibility. This in turn reduces the net disposable income of individuals. Income repayment will take away a proportion of the economic activities in the economy. Gross expenditure on goods and services will then be lesser than projected, making the overall growth of consumer-driven economies slower.

5. HUMAN CAPITAL ACCUMULATION

The given table gives an estimated empirical analysis, based on the ISA programme at Purdue University, USA, with GPA scores of ISA aspirants and non-aspirants. It is evident from this analysis that ISA participants earn slightly better grades than non-ISA students in their future years and proves that ISA will aid in the accumulation of Human Capital. However, the table also gives a disheartening estimation that even with targeted actions from stakeholders, an ISA student would earn $4,740 less than another student of the same subject without ISAs. Nevertheless, the analysis doesn't show a decline in Human Capital formation.

	(1) GPA_t	(2) GPA_{t+1}	(3) $Salary_{t+1}$	(4) $Salary_{t+1}$
ISA Participant	0.0161	0.0305	-2497.94	-4757.65**
	(0.0344)	(0.0532)	(2159.40)	(2265.32)
Prior Year GPA, Relative	0.5641***	0.3815***	3738.61*	2375.54
	(0.0304)	(0.0467)	(1998.59)	(1944.75)
SAT Math	0.0006*	0.0009*	29.50	28.52
	(0.0003)	(0.0005)	(19.05)	(23.92)
SAT Verbal	0.0003	0.0003	-17.39	14.56
	(0.0003)	(0.0004)	(16.33)	(20.96)
Funding Amount ($1,000s)	0.0000	0.0025	-12.73	-16.42
	(0.0026)	(0.0044)	(146.01)	(145.00)
Major Avg Salary ($1,000s)	-0.0222	-0.0304	874.39***	
	(0.0171)	(0.0233)	(98.49)	
Indiana Resident	0.0290	0.0865	-2055.65	-3738.44
	(0.0404)	(0.0622)	(2569.24)	(2748.19)
Major FE	✓	✓		✓
Observations	747	541	182	182
R^2	0.517	0.423	0.534	0.810

* pj.1, ** pj.05, *** pj.01

The dependent variable in column (1) is the GPA in the year for which the student applied for ISA funding. The dependent variable in column (2) is the GPA in the year after (which is only observed for students who applied for the fist year of the program and then did not graduate after the first year. The dependent variable in columns (3) and (4) is the self-reported starting salary for students who graduated and started working. Every specification includes indicators for year in school, gender, race and ethnicity, first generation student, transfer student, non-native English speaker, funding amount, income share percentage, and birth year. Standard errors are clustered on major: * p< .10, ** p< .05, *** p< .01

The institutions get returns on their initial costs only when the student is successful. Therefore, it can be assumed that institutions would have active and targeted efforts from their side to ensure employability of the students. The increased scores of ISA students also suggest that students will have a drive to earn greater scores and earn a job. The Accumulation of Human Capital mentioned will ultimately lead to an improvement in the efficiency of the labour force.

The ISA will have an allied impact on the employment market also. It is a known fact that students often take up less-skilled jobs that do not require university-level education, for timely repayment of their loans in the normal scenario.

The targeted efforts of ISA stakeholders, drive students to take up appropriate jobs based on their field of study. The ISA will navigate students to employment opportunities related to their qualifications ensuring the utilization of the said human capital. Nevertheless, the table shows a decline in ISA student's salary. This is not to be estimated as inefficient education, but that the willingness to accept a low-paying job is higher among ISA students, as they are desperate to pay off the ISA burden as early as possible. Therefore, though the economy in its totality will be able to enjoy increased output due to employees' efficiency, the wage rates are bound to go down due to the latter reason.

6. COSTS TO STUDENTS

Cost of higher education is still a key factor that inhibits students from entering colleges and universities. As institutional costs rise, the burden of investing in such a human capital input becomes imminent over students and their families and many promising students are forced to take up calculated risks while joining institutes of higher education. Unfortunately though, the fruits of education in the form of better earnings and higher skill sets are not evenly distributed. Many times, students end up not being better off or even worse off. Hence, the analysis of costs a student could encounter while opting for higher education, especially by opting a scheme that can influence his income for a considerable period is important.

7. NEW PLAYERS IN THE ECONOMY

Through ISA, institutions will have an alternative source of funds and thus the role of government funding in educational institutions will become rudimentary. Government regulations concerning funding will cease to exist which will in effect remove a barrier from the education market, making it an equitable one. This will also induce the entry of external private players, who were earlier out due to lack of funds.

For instance, the number of institutions in the USA offering vocational training in coding and computer programming has grown by over 10 times in the period from 2013 to 2016.

As most of these institutes were private for-profit colleges, they were ineligible to get federal financial support, but still grew profusely by relying on ISAs. Scope for innovative ideas in the education sector will increase, covering up the incompetencies projected in the current system.

When new institutions come into providing education, it will lead to a fall in the price of education. An ISA will turn out to be a profitable form of investment to investors and as a pocket-friendly means to students, only as it gets wider acceptance. ISA will be similar to the case of Junk Bonds in the US Financial Markets, which faced severe reproval initially. Being bonds of companies with low credit ratings, Junk Bonds faced very few patrons initially, but over time as people understood the profitability of the same, the US Junk Bond Market flourished. And as discussed earlier, ISA will also bring in new players to the education finance system. Thu,s ISA can increase the efficiency of education markets by introducing better performers and financial resources

TERMS AND PARAMETERS

The terms of an income-sharing arrangement would differ from institution to institution. However, the main parameters affecting the cost would be an annual percentage rate on income, minimum income shield if any, a maximum cap on payment if any and the number of years.

When compared to student loans, ISAs promote much more equity. In a student loan, individuals with higher stipends are able to repay their loans faster and hence at lower costs, however, individuals with lower stipends do not only have to cut down on their spending but also delay payments which adds to the cost of the loan. On the other side, ISAs, as they depend on the stipend received, would require students with higher stipends to pay a larger portion compared to a student with a lower stipend.

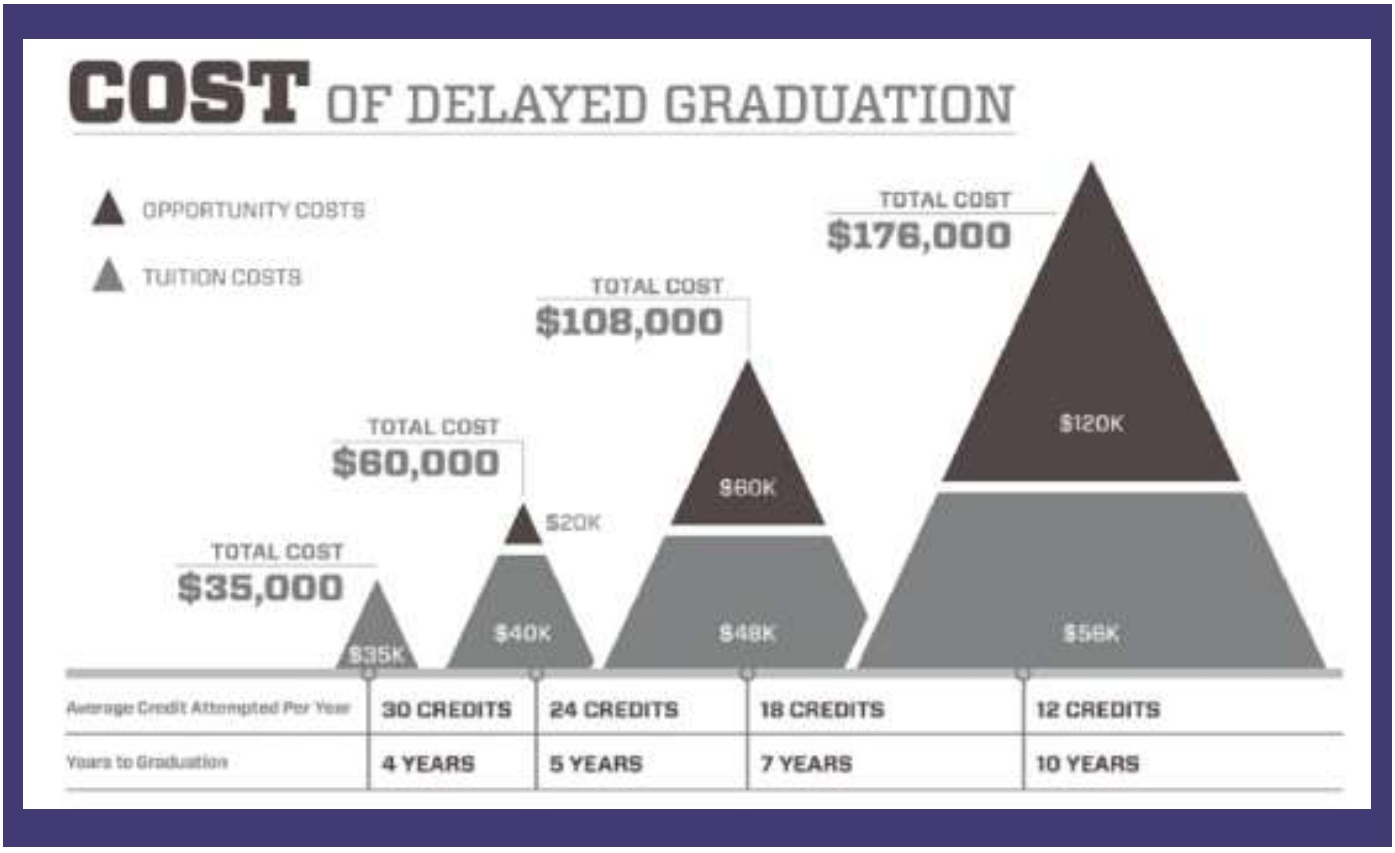
Another cost in an ISA is that with regard to taxation. In a normal course of the loan, with the income being totally taxed, the laws of most countries provide for deductions on loans especially that of student loan.

However, the same for an income-sharing agreement is ambiguous as to whether it would be considered to be an application of income or diversion of income. Do the laws consider it to create an overriding title over income or not?

A lot of other implicit costs like delaying luxuries, cutting down on savings that come with debt can also come with ISAs given their similarity in nature to a great extent.

Parameters to estimate ISA costs

- Institution's past placement results
- Credible reports on prospective profession's current average and median salary and the future outlook for chosen profession and job



BENEFITS TO STUDENTS

Deferred tuition

Although contract terms vary, most Income Share Agreements are designed so that students can complete their program without worrying about paying until they have an income post-graduation. This allows students to focus on their education while upskilling themselves in order to improve their employability, instead of working part-time jobs to pay off their debt.

Minimum income threshold

An ISA is linked to the pre-tax, monthly income. If the education provided by the institution is not able to improve a student's outcomes, then they do not receive the monthly payment. This is because ISAs typically have a Minimum Income Threshold that the individual has to meet before payments start. If their income ever drops below that point, the payments also stop until that threshold is crossed. The payments aren't due if one loses their job, after all, one can't owe a percentage of their income if have no income. This additional flexibility is a great benefit of Income Share Agreements.

No requirement of credit score

ISAs as a concept, focuses on the student's future earning capacity rather than their current financial health. As a result, this framework wouldn't allow a student's credit score to be a hindrance in enrolling into any educational program.

Reduced Racial Disparities in Student Financing

The gap in student debt held by Black and white borrowers grows by 6.8% each year. As a result, Black young adults hold 10.4% less wealth on average than their white counterparts due to student debt. Differences in interest accrual and graduate school borrowing results in black graduates holding nearly $53,000 in student loan debt on an average four years after graduation—almost twice as much as their white counterparts.
This race-based gaps reinforce each other, creating a vicious cycle.

Reduced Burden

Often, individuals look to switch jobs. This process isn't instant and there exists a time lag between leaving their previous job and being recruited at their next workplace. Under a loan, the individual would have to make payments out of their savings even in this period of frictional unemployment. However, under an ISA, students are not required to make payments while they're unemployed. As a result, they can use all their resources to find a better job or to up skill themselves.

Transfer of risk

When students sign an ISA with an institution the institution also becomes accountable to provide them with relevant skills and quality education that holds students in good stead when they seek employment in the job market. This structure creates a system in which risk is shared, because now the institution also has skin in the game.

Increased graduation rates

By 2018, approximately 62 percent of students had completed a bachelor's degree at the same institution where they started in 2012. The 6-year graduation rate was 61 percent at public institutions, 67 percent at private nonprofit institutions, and 25 percent at private for-profit institutions. The overall 6-year graduation rate was 65 percent for females and 59 percent for males; it was higher for females than for males at both public (64 vs. 58 percent) and private nonprofit (70 vs. 64 percent) institutions. However, at private for-profit institutions, males had a higher 6-year graduation rate than females (26 vs. 25 percent). The leading reason behind lower rates of graduation is that students work off-campus to make loan payments and therefore they usually fail in balancing both college and work. But in the ISA framework they are not required to make the payments when they are studying. Therefore ISA will help in improving the graduation rate.

Increased employability

Most colleges continue to provide courses that have no relevance in the current scenario. These courses don't do enough to improve student outcomes and make them employable. In the ISA framework, repayment depends on the salary of the individual. This would incentivize institutions to redesign and rethink course structures in a manner that would maximize the benefits to students, improving employability in the long run.

Are ISAs for everyone ?

ISAs aren't for everyone. It majorly depends on the terms offered in the contract which determine whether the ISA is suitable or not. The lower the income share rate, the better the ISA deal. It's important to calculate the total payback against student loans to get an accurate comparison. A student loan may be a better option in case the student is pursuing a course and institution combination that has historically provided students with well paying jobs (measured by statistics like average and gross package size, placement rates etc).

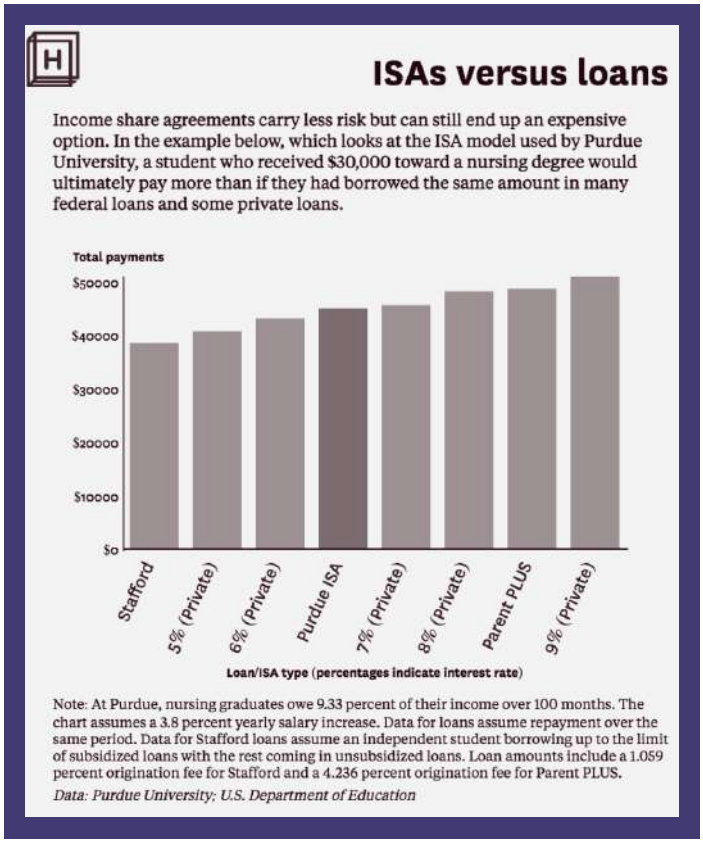
Consider an example: A student takes out $10,000 worth of ISA funding. They land a job with a starting salary of $30,000. The ISA payback is 7% of their income for 10 years. This means $2,100 for each year the student makes $30k. If after three years, the student's salary jumps to $34k and then $38k after another four years, they will pay back far more than the amount borrowed. Below is a breakdown of the payback:

- Year 1: $30k @ 7% = $2,100
- Year 2: $30k @ 7% = $2,100
- Year 3: $30k @ 7% = $2,100
- Year 4: $34k @ 7% = $2,380
- Year 5: $34k @ 7% = $2,380
- Year 6: $34k @ 7% = $2,380
- Year 7: $34k @ 7% = $2,380
- Year 8: $38k @ 7% = $2,660
- Year 9: $38k @ 7% = $2,660
- Year 10: $38k @ 7% = $2,660

This amounts to a total of $23,800. This may seem exorbitant but many ISAs do cap their total payback at 1.5X - 2.5X the loan amount.

In this scenario, the additional $13,800 is basically 'interest' on the 'principal'. If the salary rises enough, the 2.5x cap could make the individual repay $25,000 in total to borrow $10,000. That's effectively a 22.25% APR.

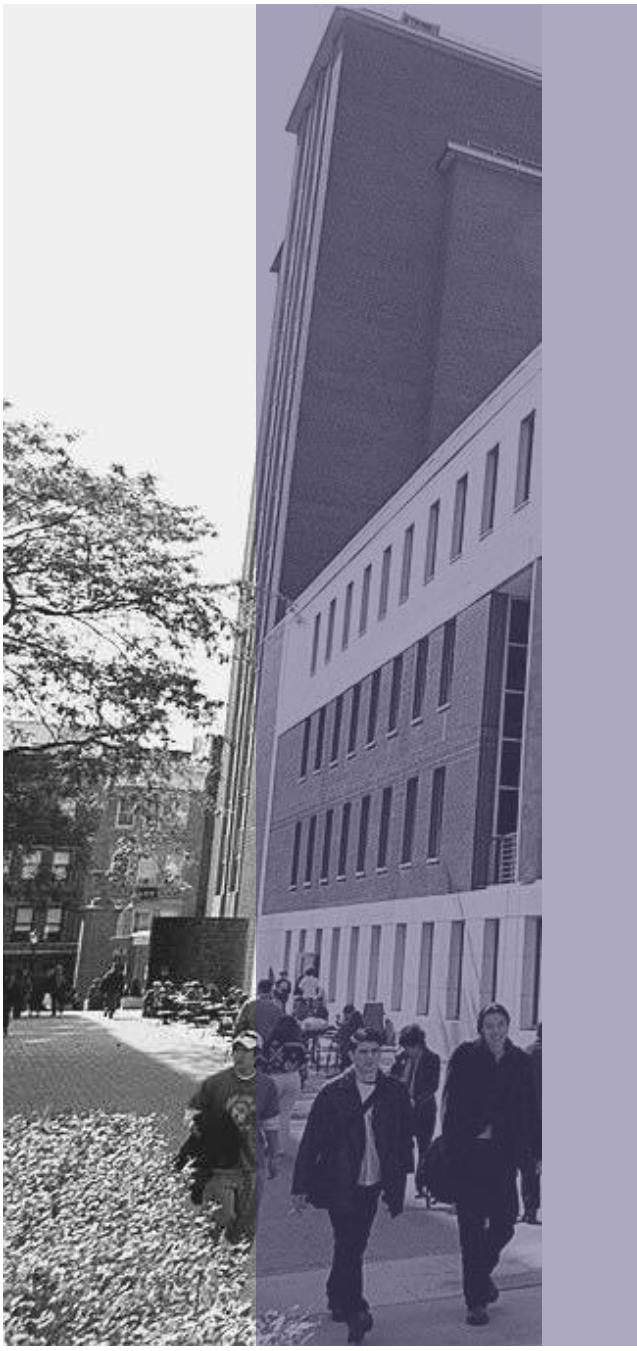
Compared to a $10,000 student loan at 7% interest (a decent offer on both federal and private loans) paid back over 10 years, total interest is only $3,933. That's a saving of ($13,800 - $3,933) $9,867 as per the above ISA terms.



BENEFITS TO INSTITUTIONS

Economic Freedom

With the introduction of ISA, traditional universities and colleges can generate further economic freedom for their students by providing them an alternative to traditional student loans. Since the market for ISA is still in a nascent stage , it gives institutions more autonomy to alter their programs and alter them according to the students' needs.



In Chile, Lumni introduced its ISA program named " Fondo Talento" which targets students who are in the last six semesters of an undergraduate program or are enrolled in any graduate program offered by an institutions accredited by the Ministry of Education. The terms of the program help find talented students and offer more economic freedom to the students with an elaborative and comprehensive study of their preferences, cognitive skills, and career orientations. Lumni also conducts a financial simulation to determine the terms of the ISA offered to the student (i.e., the repayment period and the percentage of future income), taking into account the student's field of study, type of program, and institution which provides further transparency and gives a proper insight into the agreement.

Lumni also provides additional support services like academic tutoring, mentoring, and training workshops which enhance student's soft skills, encourage consolidation of life projects and reduce dropout rates, not just expanding horizons for economic freedom but the freedom to take better career opportunities and a holistic development without worrying about future payments.

Purdue University's Back-a-Boiler program, for example, offers ISAs with terms that are competitive with private student loans, giving students an option that has better downside insurance against poor outcomes whereas the Colorado Mountain College's Fund Sueños provides aid to undocumented students accesses to financing for their degrees.

ISA's do not only focus on institutions like universities but also provide an option for alternative providers of education like coding boot camps. Students applying for boot camps do not qualify for federal financial aid and have to fund it through boot camp loans. Bootcamp loans are similar to traditional student loans but the major drawback lies with the fact that boot camp loans are personal loans that do not provide any regulation or protection to the student. Whereas on the other hand the fact that the market for ISAs is unregulated and unprecedented, the institutions can set their parameters, making programs of alternative providers much more accessible than before.

Another potential entity that could benefit from adoption of ISAs are the non-profit workforce development boards. The San Diego Workforce Partnership, in partnership with the University of California San Diego Extension school, recently kicked off its philanthropically-funded Workforce ISA Fund to address both a decrease in government funding and growing skill shortages in San Diego's labor market. The program aims to provide funds for people who are seeking jobs in new career fields and need short-term training courses. If this program does catch up with the pace and is implemented further it can cause major transformations to workforce developments.

However, the contract stipulates that the Workforce Partnership would provide wrap-around services, and sets the total "ISA value" at $6,500. It is unclear what an "ISA value" means, and the contract offers no guarantees to UCSD of the loan terms being offered to their students. It turns out, however, that obtaining a certificate in programming from the UCSD Extension program without an ISA would cost between $2,875 and $3,475—as low as 40 percent of the minimum cost that would be borne if the student were to enroll through the partnership's ISA model.

Increased Enrollment

For many institutions, the enrollment increased as students who did not want to burden themselves with a private loan or a direct plus loan, got an alternative to pay their fees. ISAs helped the schools and universities to fill in the empty seats that were created before and increased the enrollment in their programs. At Purdue University, a study by Kevin J.Mumford, a researcher, revealed that for students who are risk-averse and are aware that they might not be able to crack the labor market just after graduation, the ISAs prove to be an attractive option.

Providing ISA as an alternative helped the institutions including boot camps, schools, and universities to get enrollment from students who had the potential but were left out due to the traditionally existing financing methods. Colorado Mountain College last year launched its income-share program, Fund Suenos, which aims to help students who fall under the category of Deferred Action for Childhood Arrivals (DACA) finance their college education.

Given their undocumented status, these students can't access Title IV funding, the current model for federal financial aid found in the Higher Education Act (HEA) that includes federal loans, grants, and work-study programs

As far as the quality is concerned ISAs can operate as a discipline tool for institutions where students drop out taking large amounts of debt with them while mitigating tuition inflation. Since the major risk is shared by the investors, they make sure that the relationship between costs of those degrees provided by the institutions corresponds to the quality of education when measured in terms of student post-graduation earnings. With this, ISA's provide the institutions with the opportunity to bring out their essence of enhancing and providing quality education to talented students without being field-specific. However, this may kick out institutions where students have poor outcomes with respect to the labor market outcomes while preventing them from increasing tuition as the actual cost paid by the student does not correspond to the quality of the education being provided.

Risk Sharing

Another breakthrough because of ISA is that the risk is shared between the institutions and the students as compared to student debt where the risk was majorly shared by the student. This acts as an incentive where the institutions make sure that the student takes the correct career options, facilitates them actively in employment and career advancement, which can get them higher returns. For schools offering an ISA program, they can confidently signal the students that their programs will provide them the required skill set that will help them land a job, which ultimately increases the school's credibility.

However, on the downside, most investors try to limit their funding or push students to take up careers that will guarantee them a job after graduation. Since in an ISA the risk is majorly born by the investor, there are very low incentives for courses that are not market-oriented. And the fact that income-sharing agreements often offer safety nets after unemployment, i.e. no payment or interest to be accrued in case your income falls below a threshold, further reduces the incentives for the institutions.

Another reason why institutions put more pressure is that if a student lands an above-average job he might end up paying a lot more than what he would have paid in a private loan. For example, if a student gets $15,000 from a private ISA company and agrees to pay 9% of his salary for five years and if he earns $51,000 per year (the average starting salary for a college graduate) for the length of his term, he'll repay $22,950, which is equivalent to 10.6% of the interest rate. This acts as a major incentive for institutions to provide quality training to their students so that they can bag an above-average job, acting as a compensating factor for students who are unable to repay.

Unregulated Markets

The markets for ISAs are unregulated which makes it easier for institutions to structure their program according to the needs of the students but it does also give them the window to exploit and misuse these agreements. ISA providers could relatively keep the minimum income as low as possible to get their returns which might ultimately affect the student who'd still end up struggling with basic needs.

For instance, if the minimum income threshold is set at $20,000 per year, a student earning $21,000 is still at risk of struggling to meet basic needs after paying 10% of her income.

ISAs provide very few protections to their borrowers as compared to student loans. There isn't a lot of legal clarity in the case of ISAs. For example, when Purdue University released its ISA program "Back -the- Boiler", for the first two years, the only way a student could get to know about the length of the agreement was by submitting an application and receiving a disclosure, without anything being posted regarding the terms. It became a "take it" or "leave it" kind of a funding offer. This gives the leeway to avoid regulations that protect the consumers. Not having transparency about the terms of the agreement can make it further difficult for students to compare the other financial products available to them.

Furthermore, since there are no legal definitions or disclosures for ISAs, it gives the institutions the freedom to adjust their terms according to a student's major and/or school. This might seem like a path for institutions to be able to accomplish their objective of providing quality education and increasing enrollment but can also be a window for discriminatory lending. Since the burden of ISAs lies majorly on institutions and investors, rather than financing a student's future, they will try to make students take up majors that would guarantee repayment.

This appears highly likely in the University of Utah's ISA loan program, which offers different repayment term lengths by major. The University of Utah (as of March 2018) finances 18 qualifying majors only, including various engineering degrees, nursing, special education, economics, and computer science programs.

ISA Loan Terms for Top Three Majors for Women versus Men, University of Utah ISA Loan Program

Major (Women)	*Percent Women Statewide*	*Percent of Income and Length of Repayment (Utah ISA)*	*Total Paid for $10,000 ISA Loan*	*Major (Men)*	*Percent Men Statewide*	*Percent of Income and Length of Repayment (Utah ISA)*	*Total Paid for $10,000 ISA loan*
Elementary education	90%	2.85%, 127 months	$15,717	Electrical engineering	95%	2.85%, 79 months	$14,631
Special education	86%	2.85%, 127 months	$15,717	Mechanical engineering	94%	2.85%, 79 months	$14,631
Nursing	86%	2.85%, 98 months	$14,944	Computer science	89%	2.85%, 79 months	$14,631

Note: All of the University of Utah's ISAs have an income rate of 2.85 percent. Length of repayment, however, varies by major. Major enrollment is based off of statewide data from the PUMS Census survey data and analyzed by the author, and are not specific to the University of Utah

Different terms mean that students in Utah's top three female-dominant fields in which ISA funding is available would end up paying over $1,000 more to fund a $10,000 loan for their education as compared to those in the three fields most dominated by men; that is, it is highly likely that women are paying far more for these loans than men.

Policymakers need to develop regulations that create incentives for institutions, independent ISA providers, and investors in such a manner that they do not interfere with student's choices and gives them more liberty to take up courses that do not necessarily yield higher returns in the labour market, for example, careers in public service, teaching, etc.

A study of the Fondo Talento ISA model reflects how adverse selection might end up in making ISAs financially unsustainable for institutions. The study took into account the differences in the characteristics among ISA takers, i.e., their background characteristics, GPA, and characteristics associated with the ISA contracts that students were offered.

Regression Model
Factors affecting ISA take-up when individuals perceive that loans are riskier than ISAs on

Variable	dy/dx	Std. Err.	z	P>z	[95% Conf.	Interval]
Perceiving that loans are riskier than ISAs	0.19**	0.08	2.46	0.01	0.04	0.34
24 years or less	-0.09	0.09	-1.02	0.31	-0.27	0.09
25-29 years	0.17**	0.08	2.25	0.02	0.02	0.32
Female	0.01	0.06	0.16	0.87	-0.12	0.14
Mestizo	-0.04	0.08	-0.45	0.65	-0.20	0.12
Study in the same city of birth	0.12	0.08	1.48	0.14	-0.04	0.29
Parent BA	-0.08	0.10	-0.77	0.44	-0.27	0.12
Working	0.00	0.07	0.05	0.96	-0.14	0.15
Single	0.44**	0.16	2.66	0.01	0.12	0.76
Less than 400USD	0.14*	0.08	1.83	0.07	-0.01	0.29
400-800USD	0.14*	0.07	1.89	0.06	0.00	0.28
801-1200 USD	0.09	0.08	1.09	0.28	-0.07	0.24
Dependent student	0.22**	0.10	2.29	0.02	0.03	0.41
Has siblings	-0.10	0.10	-1.02	0.31	-0.29	0.09
First child or only child	-0.05	0.08	-0.62	0.54	-0.20	0.10
Has children	-0.16	0.15	-1.06	0.29	-0.45	0.13
ISA 150% of less	0.10	0.07	1.46	0.14	-0.03	0.24
ISA amount: 2000USD or less	-0.38	0.25	-1.52	0.13	-0.87	0.11
GRADE A	-0.26	0.17	-1.49	0.14	-0.60	0.08

Note: dy/dx: Delta change in probability. Change in the probability in taking ISA associated with each characteristic. Number of observations: 128. * p<0.1, ** p<0.05, *** p<0.01

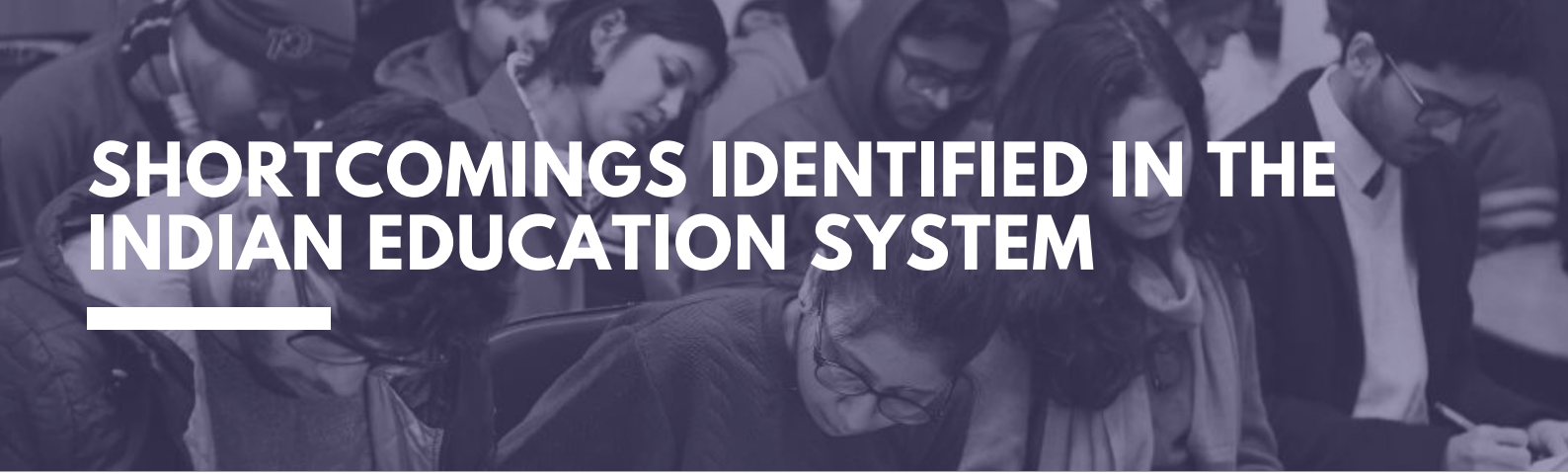
Table 2 shows that when perceiving that loans are riskier than ISAs increases the probability of taking up ISAs by 18 percentage points (p-value<1%).

The findings revealed how the effect of perceiving that loans are riskier than ISAs impacted student's decisions.

The other statistically significant factors that account for the selection of ISAs are being between 25 and 29 years old with a 16% increase in the probability of selecting ISAs (p-value<5%), being single a 43% in the probability of selecting ISAs (p value<1%), and being dependent on parents a 22% in the likelihood of selecting ISAs (p value<1%).

Since, individuals who are older, low- income with lower academic performance, are more likely to select systematically into ISAs as the results suggest, ISA programs are at risk of not being sustainable. In order to curb this, investors could make decisions on eligibility criteria that will limit the benefits of ISAs to the high performers and high-income students that appear to maximize their returns. This makes the ISA model more attractive from the perspective of the investor but will restrict ISA's possibilities to address equity as individuals belonging to low-income and minority groups out of ISA programs.

Therefore, ISA regulation needs to be developed in order to reduce the threat of adverse selection with respect to the financial sustainability of the model and ISAs concern in terms of equity. For any institution, the ISA is like a double-edged sword that may be beneficial if the participant of the program gets an above-average salary whereas on the other hand if the participant lags in his payment then the burden would mostly be on the institution.



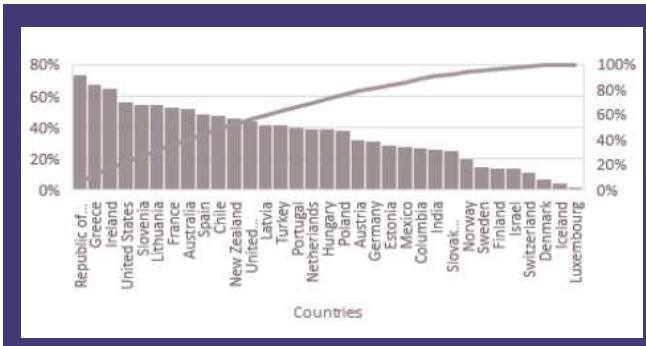
SHORTCOMINGS IDENTIFIED IN THE INDIAN EDUCATION SYSTEM

Education has been very imperative in structuring an individual's life as the future of the nation depends upon its educated responsible citizens who are aware of their rights because of education.

"Indian education system is one of the largest in the world with 1.4 million schools, 36000 higher educational institutes and 227 million students. There are 789 universities, 37,204 colleges and 11,443 stand-alone institutions in India" *UGC*

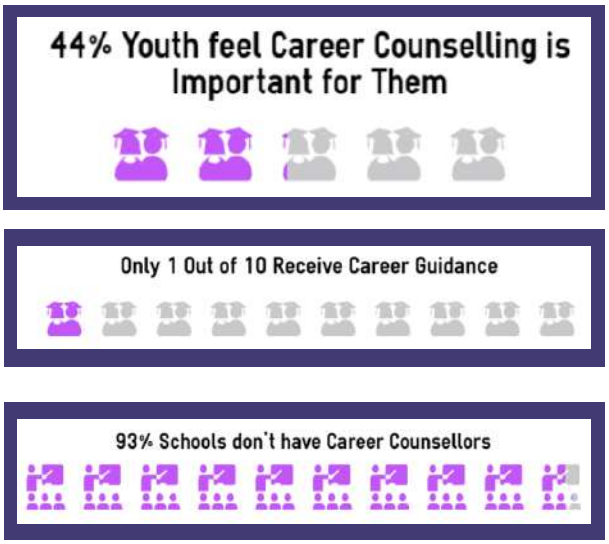
This mammoth education system has also been the recipient of criticism, when compared to its foreign counterparts for the following reasons.

- Being extremely theoretical where learning by rote is encouraged and the stress is on textbook knowledge. In India, 25.8% of the children finishing school join a college. The numbers are critical if we compare it with other countries. Education is crucial for the equity of society and the truth is we are failing the majority part of it. When we examine the statistics across nations, India ranks 48. The largest education system in the world certainly can do better.



Student's enrolled in post secondary non-degree and Degree education

- To a large extent, the Indian college system does not link classroom learning with career options. We see a gap in career education being taught in the classroom, as the trend of career counseling is increasing in India. According to statistics, 44% of Indian youth say career counseling is important for them but only 1 out of 10 students receive career guidance in India, 93% of Indian schools don't have career counselors leading to 77% drop out after class 10. India needs 1.4 million career counselors to achieve the standard ratio of 250:1 (students: counselor) prescribed by International School Counsellors Associations (ISCA).

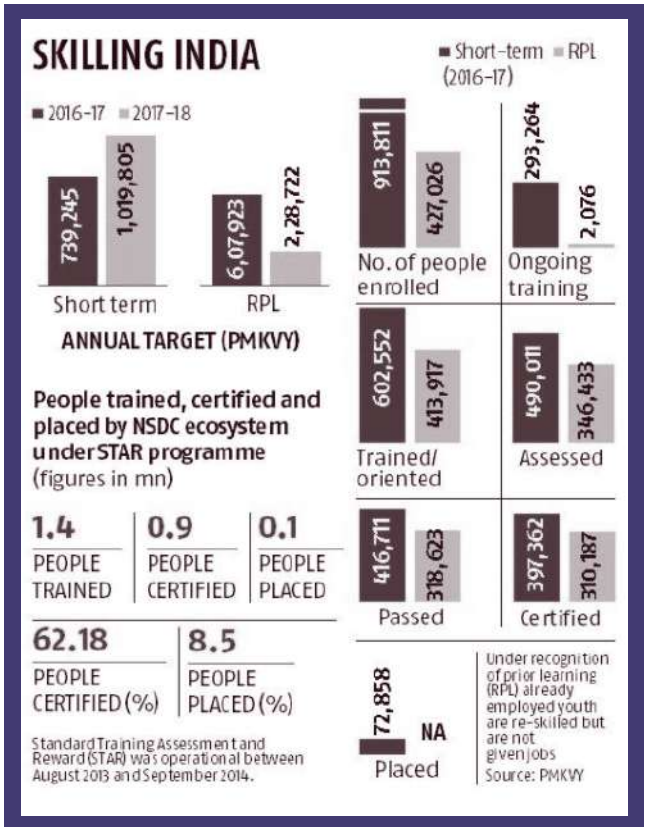


- Interdisciplinary flexibility is either lacking or imperfectly developed in India's college education system, at all levels. From the seemingly simple task of taking many courses from a discipline that is not your major to the difficult task of incorporating a minor program or a minor degree into your portfolio, most Indian universities will not allow you to do either. This is for multiple reasons: not having full range of departments, relatively small Teaching Assistant and Professor populations make it logistically difficult to implement true interdisciplinary flexibility.

- Privatisation did help in expanding higher education and increasing enrolment. The enrolment ratio in higher education has considerably increased due to privatisation, but that does not reflect the quality of education being provided. According to NAAC, about 72% of the institutions in India need to improve the quality of their resources and education to apply for accreditation. The government rolled out the revised accreditation framework (RAF) in 2017, which came into effect in 2018 and has so far accredited 74 universities and 1,485 colleges.

- A large number of Indian graduates are unemployable, because of a lack of focus on practical skills. Skill development is the main requirement for India now as, in 2017-18 alone, around 33% of the formally trained youth -- both men and women -- remained jobless due to lack of the right skills. For the 688 million Indians falling under the working-age category, skill development is more like a major necessity. The government did take up initiatives like Industrial Training Institutes(ITI) which were earlier known as Industrial Training Centres(ITCs) can be seen as one of the most prominent ways of providing skills in India, however, the courses require an entry qualification of 10th or 12th which makes over 50% of the workforce unemployable. The instructors at these institutes are not qualified enough which creates major problems like low placements and increased dropouts. About 67% of the people who got trained had a household income of less than Rs. 5000.

The Pradhan Mantri Kaushal Vikas Yojana (PMKVY), was initiated in July 2015, with an allocation of Rs 1,500 crore to train 2.4 million people, including 1.4 million fresh trainees and skilling of the remaining under the Recognition of Prior Learning (RPL) program. Even after having such an ambitious target and the required resources, the benefits of the program could not be reaped up to its capacity. According to reports, the National Skill Development Council was only able to skill around 600,000 youth till September 2017, and could only place 72,858 trained youth, i.e., a placement rate of around 12%.



- The Gross Enrollment Ratio(GER) in India for higher education has always been at a high time low. Currently, the GER stands at 26% and is expected to reach 40% in 2040. In its vision plan for 2019-24, the ministry says it needs to address the "geographically and socially skewed higher education sections in India." Just among BRICS nations, India is slightly ahead of South Africa and way behind Russia which has a GER of 81.8%, Brazil with 50.5%, and China with 50%. This is mainly due to the economic, social, legal, and regional disparities in access to higher education.

- Lack of Capital: A recent report has found significant shortfalls in budgetary funding and utilisation in education. This has resulted in critical infrastructure gaps, according to a parliamentary panel on education. For instance, the School Education department proposed to allocate ₹82570 crores. But only ₹59845 crores were allocated. Only 56% of schools have electricity, with the lowest rates in Manipur and Madhya Pradesh. Less than 57% of schools have playgrounds according to the UDISE 2017-18 survey.

Apart from the infrastructural gaps, even the nutritional requirements of the students are not being taken care of. The mid day-meal scheme of the government which was implemented with the perspective of providing nutrition and increasing enrollment in schools has not been able to achieve its objective of providing nutrition to kids as many UTs and states due to lack of funds. The Centre pays Rs 600 and state Rs 400 (60:40 funding ratio) for each cook/help, with some states paying more. There are about 25 lakh cooks/helpers employed across India through MDM who do not even get the basic income for their job.

The funds being allocated to schools are a one-time grant because of which they are unable to procure the required nutrients that would help them meet the basic supplementary nutrient norm.

The Union Women and Child Development (WCD) Ministry in November 2019 collected and tested 620 samples from about 11 states and UTs found out that they did not follow the supplementary nutrition norms.

The ministry examined samples from Delhi, Karnataka, West Bengal, Bihar, Assam, Punjab, Chhattisgarh, Chandigarh, Arunachal Pradesh, Andaman and Nicobar Islands, and Meghalaya, and most of these states fell short of the required protein and kilocalories content.

Thus, lack of capital harms kids and the Indian education system from both inside and outside.

- The global recognition of a degree from an Indian university is not very high as compared to its foreign counterpart. The total number of Indian students overseas increased from 66,713 in 2000 to 3,01,406 in 2016, based on the analysis of data from the UNESCO Institute of Statistics. This translates into 2,34,693 more students overseas in 2016 as compared to that in 2000—at a robust average annual growth rate of 22% in 16 years. These numbers will continue to offer a staggering image when we consider the pro-immigration policies and immediate work opportunities that the students gain in the destination countries.

In 2018, 20.8 million Indians applied for 90,000 available jobs with the Indian Railways which is the largest public sector employer, according to the Times of India. That provided a livelihood to less than 1% of the applicants leaving more than 99% of applicants unemployed. This is one of the most prominent drawbacks that the Indian education system has to overcome.

- Wastage of Resources- Lot of Dropouts : One out of every eight students enrolled in a school or college tends to drop out midway without completing the education and over 62% of all dropouts happen at the school level, a survey by the National Statistical Office (NSO) of the government of India has revealed. Overall, 12.6 percent of students drop out of studies in India, the survey found. More than one-third of the dropouts happen at the secondary and upper primary levels of education. While 19.8 percent of students discontinued education at the secondary level, about 17.5 percent dropped out at the upper primary level, the survey said. At the higher secondary level, the dropout rate is 9.6 percent.

There has been a significant number of surveys and researches that have been conducted to analyze the reasons for high dropouts happening at the secondary and upper primary levels of education. Low achievers and students from low socio-economic backgrounds form a higher proportion of the students who drop out of school. This could be due to inadequate parenting, poor infrastructure, demotivated and unqualified teachers, augmenting family income.

The fact that education after 12th grade is far more expensive and considering how skill development programs and other government initiatives (which people might be unaware of) have a very low placement percentage, may create a view that schooling has very limited economic returns.

- Mass Illiteracy : There are around 900 million people in the world who cannot read or write. According to UNESCO, 287 million, or 37% of the world's illiterate people are Indian. While education is every child's basic right, severe poverty and deprivation, population growth, war zones, and natural catastrophes are depriving many children of a world of books and learning. India's literacy rate is about 74% - leaving a quarter of the population without basic reading and writing skills. Poverty and illiteracy are closely linked - and with the second largest population in the world, India is home to one-third of all world poverty. While 22% of Indians fall below the poverty line, it has been estimated that more than half of the nation's population lacks even basic literacy skills.

- Lack of interest: monotonous lecture-teaching method, no room for creativity, experiments, and discussions; very theoretical curriculum - Our system has to change its parameters of "good subjects". We have been pioneers of mathematics and science, but that is not the only thing that we can do. There has to be an equal emphasis given to other social and literary subjects.

Academic subjects are given so much importance that teachers are often seen using up the periods allotted to sports and other extra-curricular activities to finish up their syllabus. There has to be a base understanding of the very process of learning here. Learning is a creative process, an individual is expected to think, react, act and process the information with a blend of creative and practical conclusions. The entire weight should be shifted to learning and not just scoring marks. This has to be done both from the school and the parent's end. Over 40% of government schools don't have playgrounds.

- Zero functional literacy: Before attaining functional literacy, i.e. completion of study up to Class V, premature withdrawal should be stopped at any cost. Wastage is appalling in the case of girls. Hence greater attention is to be paid to the rate of wastage and stagnation among girls. After the age of 9 or 10, the child becomes an economic asset because he can work at home or earn something outside. Of all the problems mentioned so far the greatest and the most menacing is the problem of wastage and stagnation. The measures already taken in this regard should be intensified particularly to children from lower socio-economic groups.

- No play and all work: sports, art and culture, extra-curricular activities - The year-end results and board examinations in the Indian education sphere hold utmost significance, and not getting enough marks may subject students to a series of mental bullying, humiliation, and loss of confidence. Sports, art & craft, extra-curricular activities aren't held in high regard by society, parents, and institutions.

A change in curriculum to add creative subjects along with the regular maths and science will create a great blend and help the student understand the bigger picture right from the beginning other than realizing their actual passion in the latter half of their lives.

Many schools in India, specifically in Delhi have considered this and offer various opportunities and fields to explore, which makes it easier for students to realise their interests and passions. Entrepreneurship classes, mentorship programs in creative courses create scope for creativity. For example, in the last decade, there has been a boost in promoting fields like animation and robotics. However, there is a long way for schools to develop on these lines and innovate on these tangents that will create a more holistic and inclusive curriculum that helps students understand the bigger picture.

- Teaching Methodology- The syllabus is one thing that needs a change, while teachers and teaching methods require a whole new makeover altogether. Our teaching methods are dated. We still use blackboard and chalk as the only mode of teaching. Even though there has been a wave of the switch to the e-learning mode, that has happened in a very small proportion. Not only is our teaching method inefficient but so are our teachers. The school should take measures in up-skilling them with newer methods of teaching as well as adapting them to agile e-learning. E-Learning is a creative learning process, but only with a combination of a good tutor.

Ranjitsinh Disale, who won the Global Teacher Award 2020, sets an example of a teacher who was willing to bring this change. After putting in a great deal of efforts, he redesigned all the textbooks of grades 1-4 for better comprehension and embedded them with audio poems, video lectures and assignments that could be accessed through unique QR codes. We need more such teachers who can bring a change by such innovative methods and collectively they can bring a major breakthrough in the teaching methodology of the Indian education system.

- Brain Drain: Among Asian countries, India continued its trend of being the top country of birth for immigrant scientists and engineers, with 9,50,000 out of Asia's total 2.96 million. India's 2013 figure represented an 85% increase from 2003. The number of Indian migrants has been on the rise by 2 to 3% every year. Migration is still seen among Indians today not only due to under-development but also due to a deep-rooted fascination with moving abroad in our culture along with strong social networks in destination regions. 35% of the Indian population consist of youths in the age group of 15 to 24 years. India’s working-age population is growing by 1.3 million every month, with a stagnant job market added by a lack of employment.

INCOME SHARING AGREEMENTS IN THE INDIAN CONTEXT

Improving the Education System is of utmost importance to ensure future prosperity. The ISA policy could serve as the bridge between today's shortcomings and tomorrow's achievements in the Indian Education System.

Increased Accountability

The institutions, the educators, the managements are the people who provide instructions, curriculum, and demonstration to the students and thus pave way for results. The ISA policy will increase institutions' accountability to show remarkable results in students' on-campus placement rate, as the institutions would be the ones incurring the loss with poorer results. In short, creating accountability in public or private education is extraordinarily complex, but ISA will ensure this in a cinch demeanor.

Education Partnership / Workshops

A business–education partnership is involvement between schools and business-industry, unions, governments, and community organizations. These partnerships are established by agreement between two or more parties to establish goals, and to construct a plan of action for the achievement of those goals.

Business-education partnerships serve business and industry by providing activities such as in-service training to employees, use of facilities, student-directed projects, software development, or marketing research. An educational institution can forge a mutually beneficial relationship with any number of businesses and can have other stakeholders including parents, students, and community organizations. This type of relationship helps both parties achieve their desired learning outcomes by sharing values and resources.

Global Recognition of Indian Degrees

Increasing the accountability of institutes under ISA policy will translate into improved products coming out of these institutes, which will increase the recognition of Indian Degrees in the Global market and improve the funding of education institutes in the country. Since NEP 2020 proposes and promotes the objective of inviting foreign universities to set up campuses in India, this could benefit the Indian education system in multiple ways. With foreign universities building their campuses in India this would provide the students with a competitive advantage as they get better opportunities to understand the foreign culture and develop their acumen in a multicultural environment, increasing their employability in the global job markets.

ISAs by bringing more equity among the students will help them explore the opportunities created by internationalisation of the education system.

ISAs offer flexibility to students

The student must only reimburse a set percentage of his or her income. Payments stop when students are not earning an income or when they reach a maximum indebtment rate, typically, no collateral is required when the student enters the contract, the fixed percentage, regardless of salary variations, offers the student more freedom in choosing the job he/she wants, rather than the one he/she needs in order to pay back a loan; in case of market or career failure, the student experiences less pressure to pay back a loan.

Improves quality of education

Since the major risk of ISAs is shared by investors, they make sure that the cost of the degree is in accordance with the quality of education being provided by the institutions. This creates a major opportunity for institutions to enhance the education being provided by them and keep on evaluating their course and teachers. In addition to this, ISAs also give opportunities to training boot camps that can help in bridging the skill gap among Indian students by providing them experiential learning and making them job-ready. BridgeLabz, through its Maker Program, has been hiring engineers from the top institutes and has been providing them with training in industry-specific skills. This helps the companies get a pool of trained-engineers and at the same time, students get the security of a job, by acquiring the required skill-sets.

Increased Enrollment

With respect to GER, ISAs can help in increasing enrollment and can bridge down the gap caused by economic disparities. By providing an alternative for funding higher education, ISAs can offer students coming from economically weaker sections access higher education and bag a job. This may result in uplifting people from economically weaker sections as they can opt for higher education and at the same time increase the country's GER. People coming from diverse communities can opt for courses of their choice and with the help of the private investors can choose the best course for themselves as well that will help uplift their economic background.

CHALLENGES

Less Funding to support a large system

For the ISA policy to be implemented in the whole of India it will require a large number of fundings from the private sector that too with the added risk as with an ISA a student will only have to start making payments after he/she graduates and once they get a job, and they usually do not owe anything until they earn over a certain amount. This means that they will only pay if their education leads to success in the job market, transferring the risk to the private financial backer/ investors and making them more accountable.

Since ISAs can either be funded through a private investor, like Lumni or through fintech startups or through the university itself like Purdue University, a large number of funds will need to be allocated to public universities in India to support the model which can be a major challenge as with 51,649 colleges, India has the largest advanced education system in the world and needs adequate funding. Proper regulation will be required for the ISA model that will be carried out in India so that the ISAs being offered to students are properly monitored and not extractive.

Asymmetric Information

ISA is a policy that involves various stakeholders including students, employers, and institutions-both educational and financial. Hence symmetry and uninterrupted flow of vital information is key for all stakeholders. In the real world, achieving perfect symmetry is impossible. However, understanding the existence and impacts of asymmetric information is vital.

As a consequence of lower funding, the number and quality of professors suffer - Universities barely manage to do just about enough in terms of teaching by using large armies of ad hoc or part-time faculty. Indeed, all government universities make generous use of part-time faculty out of necessity, because they do not have budgets to hire full-time faculty. Faculty positions must first be sanctioned by the state government and since nearly none of the states are keen on improving higher education, the universities cope with depleted numbers of faculty members as older ones continue to retire. Hiring ad hoc faculty – who are poorly paid – is the only affordable option but over time, if not absorbed into the system, they lose all motivation to do the job well. Ad hoc faculty allow the institution to continue offering courses and programs but it is well-established that institutions with relatively higher numbers of such faculty do a less-than-satisfactory job in classroom instruction. All this with the ISA in the picture will reduce the on-hand budget that the college authorities have as students have to pay only after they land a job.

Equitable Distribution

While education is seen as a great equalizer, inequality in access or quality in education risks reinforcing social and economic inequalities. India's education system is marred by gross inequalities in access, completion, and quality. Class, linguistic background, gender, ethnicity, and place of birth all have an impact on the educational experience children have in India. These, in turn, contribute to inequalities in knowledge in India's society.

With the ISA in the picture in the higher education system, the students coming from rural backgrounds and who are less privileged to have received a quality education won't get admission in quality institutes.

Since the risk is majorly shared by the investors, they might systematically invest in students who have a higher possibility of getting placed. Students with a better academic profile that can guarantee or ensure returns to the investors will be chosen over a student who does not have a promising academic profile. Again the students coming from less privileged socio-economic backgrounds might not get the benefits of ISAs, which kills the main objective of ISA, i.e, to make it more equitable.

Regulation

The Indian education system comprises many state and national boards at the secondary level of education to have an ISA policy that suits the need of the students in each of these boards individually is very necessary because of growing differences in the quality of education and teaching staff that each of these boards offer to the student. To overcome this, ISA providers can be given the freedom to frame the terms of the agreements according to the needs of the student as was done in the University of Utah.

But to ensure that the agreement is transparent and fair there needs to be a proper regulation and monitoring system for ISAs in India otherwise it may lead to discriminatory lending. The investors can frame their terms in a manner that they get maximum returns after the student gets placed by having a minimum threshold so low that the student barely is able to meet his or her basic expenses.

SAMPLE ISA MODEL

IMPLEMENTING THE ISA FRAMEWORK FOR A PRIVATE INSTITUTION IN INDIA

1. Funding

An ISA programme would require a fund to be set up with contributions from institutional investors, multi-strategy hedge funds, family offices as well as individual investors. In some cases, it is prudent for private universities to also put up their own capital in order to show that their success is dependent on the students' success. An investor would make their decision based on several parameters (stated later on) that decide the risk-return dynamics of an educational institution, which is a function of Student Outcomes. Investors will have two options -

a) Direct funds to all educational programs available in the institute; or
b) Create a portfolio consisting of degrees with different duration. However, the institution would be required to set a minimum allocation requirement for each investment option (asset class). This is being done in order to ensure that less popular courses receive the funding they absolutely require in order to remain functional and relevant in the long run.

The next step is to hire a 'master servicer' who can manage student accounts, design, monitor and evaluate the program, and provide a platform for applicants to easily navigate ISA applications in return for a fee. The Finance department of the Institution would be responsible for collecting data from employers and ISA beneficiaries, estimating annual payments and collecting dues.

2. Terms of The Contract

Here is an interactive Excel Model made by us to examine various ISA scenarios :

https://docs.google.com/spreadsheets/d/1Jx5j8Ix68H70fy9S3EJ2fPVkORGYxZfw6RrW0YyxD4Y/edit?usp=sharing

Points to be noted

- The minimum annual income threshold is an amount 50% lesser than the Expected Median Salary, or 1,50,000, whichever is greater.
- The risk of defaults, which is dependent on the institution in the long-run, is factored into the premium demanded by the investor, which is determined according to a set of parameters listed in further sections.

ISA Contract Model

Input Variables		
Risk Free Rate		5%
Risk Premium		3.0%
Total Required Rate of Return		8%
Increase % in Salary each year		8%
Funding Required for one student for one year	₹	70,000
Years for graduation		3
Total Funding Required for one student	₹	210,000
Contract Years of ISA		10
Expected Median Salary	₹	450,000
Minimum salary for adequate standard of living	₹	150,000

Note: Only yellow highlighted cells are to be plugged in

Data for Tier 1 Private Colleges		
Average of Median Salary Per Year	₹	400,000
Average of Funding Required Per Year	₹	65,000

Ouput Contract		
Expected corpus by Investor		529,860.30
Number of Years of Contract		10
Income Share (%) of Contract		8.1%
Minimum Income Threshold	₹	225,000
Payment Cap	₹	91,440
Estimated corpus of Investor		529,860.30
Profit/Loss for Investor (in Future Value)		319,860.30

Calculations	
Sum of GP of Salary	6,518,953
Expected corpus in each year invested	
Year 1	190,373.66
Year 2	176,271.91
Year 3	163,214.73
Year 4	
Year 5	
Year 6	
Year 7	
Year 8	
	529,860.30

- Under this model, the investor provides an annual funding, for the entire course of the programme. This amount will remain locked in for the duration of the course and period of the ISA contract, the final corpus (principal + return) being available to the investor at the end of the repayment period.
- The individual's salary is assumed to increase at an annual rate of 8%. The guidelines for settling under/over payments are listed in further sections.
- The P/L outcome shows the maximum profit that the investor can earn over the course of the ISA contract, not accounting for defaults.
- In our model, instead of setting the payment cap as a factor of the total funding amount, it is set at a level assuming the individual's actual salary to be 2.5x the expected annual median salary.

3. Situational Analysis

- If the student wishes to pursue a postgraduate program after an undergraduate degree for which they enrolled into an ISA programme, then the payment period will be deferred by the duration of the course + the onboarding period.
- If the individual is employed part-time/full time but still falling below the minimum income threshold, the ISA period will be extended by a period of 3-5 years, reducing the annual payment burden, to be paid as and when their income rises above the threshold.
- If the individual does not manage to meet the minimum income threshold in the first five years of graduating, provided they are not pursuing any other educational program and are actively seeking better job opportunities (proof of which must be given), then the ISA amount will be waived off.

- In case the individual is unable to participate in the labor force, due to a temporary illness, pregnancy, or to care for an ill family member, then the ISA payments will be deferred by a duration decided on a case-to-case basis.

- In case of death or permanent disability (proof of which needs to be provided), the ISA payments will be written off.

- If the individual is starting their own business after their degree (for which they enrolled into an ISA program), a grace period of 1 year will be given.

- Monthly Payments will be recalculated at the beginning of each Financial Year. If no documentation is provided and the individual is not in deferment, it will be assumed that Earned Income has increased by 8% and Monthly Payments will be adjusted accordingly. Since this is an estimate, it may result in Monthly Payments that are either higher or lower than what is actually owed. Any over-or under-payments will be reconciled the following year.

- The individual will not be allowed to enter into another ISA programme, unless all payments of the previous ones are paid off.

- Although this ISA is not 'a loan or other debt or credit instrument', the ISA provider may inform credit bureaus about repayment behaviour.

- If the individual desires to extinguish their obligations under an ISA prior to the expiration of their Payment Term, an amount equal to the Payment Cap, less any Monthly Payments already made, plus any outstanding fees, must be paid.

4. GRIEVANCES REDRESSAL AND LEGAL REMEDIES

Disputes based upon the contract, tort, consumer rights, fraud and other intentional torts, constitution, statute, regulation, ordinance, common law and equity will be resolved by the appropriate court of law.

If the individual defaults on their payments, the institution will be allowed to enforce all legal rights and remedies in the collection of such amounts, available to it as per law.

5. RISKS INVOLVED & METHODS OF REPLICATION ACROSS DIFFERENT INSTITUTIONS

Institutions across the country vary by geography, enrollment rates, quality of education, curriculum and infrastructure. All of these factors are essential in deciding Student Outcomes, and hence the risk involved for an ISA investor. After assessing the added risk, the model can be replicated in Tier 2 and Tier 3 cities as well, simply by adjusting the ISA Terms, (Repayment Period, Maximum and Minimum Thresholds and ISA Share percentage) to match the Investor's return expectation.

OUTCOME AND PERFORMANCE BASED PARAMETERS

Listed below are parameters, based on which each institution will be rated by an independent rating agency or MHRD, thus deciding the estimated risk premium over and above the risk-free rate.

1. Combined metric for Faculty with PhD (or equivalent) and Experience **(15)**
2. Student Welfare Expenditure by the college **(5)**
3. Average CGPA/GPA/Grade Performance **(10)**
4. Upskilling initiatives taken by the Institute **(15)**
5. Student-run Activities and Initiatives in the Institution **(10)**
6. Internships, Placements and Higher Education **(25)**
7. Public perception **(15)**
8. Technology utilization by the college **(5)**

RATING MECHANISM

S.No.	Score	Grade	Risk Premium	Meaning
1	81-100	AA	3%	Prime, Least Risk
2	61-80	A	7%	Low Grade Risk
3	41-60	BB	13%	Medium Grade Risk
4	21-40	B	16%	Non- Investment grade speculative
5	0-20	C	20%	Extremely Speculative and Substantial Risk

EXPANDING THE ISA FRAMEWORK TO PUBLIC INSTITUTIONS

Public institutions refer to educational institutions - universities and colleges affiliated to, and receiving funding from either the central government or state government or both. As per UGC records there are 425 state and 54 central universities, in addition to 40 Institutions of National Importance.

These institutions receive funding from the government in the form of both maintenance grants to manage working requirements and development grants for infrastructural and academic requirements of the institutes. Since such institutes receive large funding, the tuition fee here is less when compared with the other private for-profit institutions. Hence, the model we propose is a hybrid system of tuition fee and a repayment from future income.

Under this model, a major share of the costs incurred by an institute will be covered by the funds given by the government, as in the status quo. However, this will be only to an extent and the rest will be met through the fees paid by the students.

The basic model is that a student, while joining an institute, will be given an option either to choose payment of the tuition fees upfront or to pay it as a proportion of their earnings in their future for a fixed period of time. The structure of repayment and the period of payment shall be the same for the students in all institutions offering a particular course.Much like the format of income tax, the payment will be calculated annually and will be levied as slabs on various levels of income.As said earlier the grant from the government will be less than the total funds the institutes require. Hence there should be some students who pay fees upfront along with the others who opt for future repayment.

The government is a key stakeholder in the functioning of public institutions and hence, shall continue to fund the institutions. This is bound to continue as the government is assumed to be risk neutral and large enough to protect all the public universities in the country. The backup of the government will cushion the risk of 'underpayment by students'.

The most instrumental players in this paradigm will be the Institutions. The finance/accounts department of the institution will be responsible for the collection of the repayments made by the students.

However, they will not be worse off in any chance, as they will still have a backup of government funding. It can be noted that the form of government funding that exists now is not based on any specific metric but on the requirement/demand of a specific institution. The institutions will be dependent on payment made by the graduates of that institute. Thus, institutes also will become stakeholders in the future earnings of their students. This will directly incentivize institutions to become active stakeholders in their students' future, thereby increasing the human capital that increases student earning, thus causing increased returns through repayment.

The students here will be taking the most important decision. We assume here that future earnings of a student will be determined by learnable skills and innate abilities. Higher income in the future will mean a higher repayment in the future. A graduate is bound to pay income tax in the future, this repayment would just be an addition to that. Here, it is also natural to expect that a student who expects very high income in the future will opt only for the upfront fees.

In order to examine the feasibility of this financing instrument in the context of Public Institutions, let's select a specific college and test the model. What better example than our own institution, Shri Ram College of Commerce.

Considering the parameters listed above, it's safe to assume that the college would achieve a grade of AA. Hence, any investment in an ISA for SRCC would be attached with a risk premium of 3% (according to our model).

As a result of achieving better Student Outcomes (in terms of the college's median package), this model would allow the individual to pay back their funding amount in a much shorter duration (three years) at a much lower rate (4.8%).

The importance of imparting quality education and improving student outcomes can be highlighted by examining what the same model would look like for a different college.

ISA Contract Model

Input Variables		
Risk Free Rate		5.0%
Risk Premium		3.0%
Total Required Rate of Return		8.0%
Increase % in Salary each year		8.0%
Funding Required for one student for one year	₹	30,000
Years for graduation		3
Total Funding Required for one student	₹	90,000
Contract Years of ISA		3
Expected Median Salary	₹	847,000
Minimum salary for adequate standard of living	₹	150,000

Note: Only yellow highlighted cells are to be plugged in

Data for Shri Ram College of Commerce

Median Salary Per Year	₹	847,000
Average Funding Required Per Year	₹	30,000

Ouput Contract		
Expected corpus by Investor		132,500.74
Number of Years of Contract		3
Income Share (%) of Contract		4.8%
Minimum Income Threshold	₹	423,500
Payment Cap	₹	102,037
Estimated corpus of Investor		132,500.74
Profit/Loss for Investor (in Future Value)		42,500.74

Calculations

Sum of GP of Salary	2,749,701
Expected corpus in each year invested	
Year 1	47,606.23
Year 2	44,079.84
Year 3	40,814.67
Year 4	
Year 5	
Year 6	
Year 7	
Year 8	
	132,500.74

Here, we select another college within the same university, Deen Dayal Upadhyaya College. Considering it is a NAAC B Grade Accredited college, it is fair to assume that any investment would carry Medium Grade Risk (and hence a 13% premium according to our model).

Even though the total funding amount is lower in this case, poorer student outcomes (in relative terms) would lead to a much longer contract period (8 years) at a higher rate (8.6%).

ISA Contract Model

Input Variables		
Risk Free Rate		5.0%
Risk Premium		13.0%
Total Required Rate of Return		18.0%
Increase % in Salary each year		8.0%
Funding Required for one student for one year	₹	19,000
Years for graduation		3
Total Funding Required for one student	₹	57,000
Contract Years of ISA		8
Expected Median Salary	₹	330,000
Minimum salary for adequate standard of living	₹	150,000

Note: Only yellow highlighted cells are to be plugged in

Data for Deen Dayal Upadhyaya College

Median Salary Per Year	₹	330,000
Average Funding Required Per Year	₹	19,000

Ouput Contract		
Expected corpus by Investor		301,059.09
Number of Years of Contract		8
Income Share (%) of Contract		8.6%
Minimum Income Threshold	₹	165,000
Payment Cap	₹	70,760
Estimated corpus of Investor		301,059.09
Profit/Loss for Investor (in Future Value)		244,059.09

Calculations	
Sum of GP of Salary	3,510,087
Expected corpus in each year invested	
Year 1	117,342.59
Year 2	99,442.88
Year 3	84,273.62
Year 4	
Year 5	
Year 6	
Year 7	
Year 8	
	301,059.09

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