International Journal of Learning, Teaching and Educational Research
Vol. 15, No. 1, pp. 1-13, January 2016

Funding Higher Education in Australia: Is it Time to Look at Income Share Agreement as an Alternative Model to Income Contingent Loans?

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Abstract. Human Capital Contracts are an emerging alternative means for financing the up-front investment cost of university students. This method involves investors financing the development of a students' human capital based on their expected future incomes and taking as share of their future income for a defined period as a return on their investment. In recent years such an approach has begun to emerge in the United States in particular. In Australia student fees are funded through an income contingent loan system however this system is struggling with high debt levels and high proportional write offs. Would an Income Share Agreement (ISA) program possibility be an alternative scheme which may take pressure of the Australian Government funding by transferring the risk to the private sector? Ideally such a scheme would maintain the basic principles behind the current system, but allow for private investors to predominantly fund the scheme. Potentially principles from both financing systems may provide a framework for a new innovative model into the future. This review suggest that further research appears to be warranted as this alternative scheme has potential to address some of the key Higher Education funding concerns in Australia at this time.
Keywords: HECS; Human Capital; Funding; Higher Education; ISA; "Income share agreements"

Introduction

Funding of higher education is vital for the achievement of the educational aspirations of any nation. If the funding is not adequate, it is unlikely that the desired results will be actualised.

The capital labour market is known for its limitations as the market has difficulty pricing the work in progress value of individuals. According to Yu and Salyards (2008) Capital Asset Pricing Models do not allow for the market to adequately price human capital as a work in progress. An investment in an individual's higher education is an investment in a future asset, but there is no way to secure that investment. As Chapman (1997) pointed out "there is no market for human slavery," so how does an investor invest in a future graduate's expected income? Future income is uncertain, and there is no collateral to fall back on or recover should the future income streams not eventuate.

Friedman outlined the reasoning for his Human Capital Contract ideas as follows:
"The counterpart for education would be to "buy" a share in an individual's earning prospects: to advance him the funds needed to finance his training on condition that he agrees to pay the lender a specified fraction of his future earnings. In this way, a lender would get back more than his initial investment from relatively successful individuals, which would compensate for the failure to recoup his original investment from the unsuccessful" (Friedman, 1955, np.).

"On the other hand, if individuals sold 'stock' in themselves, i.e., obligated themselves to pay a fixed proportion of future earnings, investors could 'diversify' their holdings and balance capital appreciations against capital losses. The purchase of such 'stock' would be profitable so long as the expected return on investment in training exceeded the market rate of interest"(Friedman & Kuznets, 1945, p.90).

Over the last 5 to 7 years there has been considerable interest in Human Capital Contracts or Income Share Agreements (ISA's) as they are sometimes known. Contracts through organisations such as Pave, Upstart and Alumni have been commenced in a Friedman style approach. This has also come to the attention of regulators who have begun to consider guidelines for the operation of these schemes (discussed further below).

Australia has a significantly different approach to the funding of higher education (HE) to the United States, however these concepts should be explored to further to examine whether they can be adopted successfully to the Australian context and for the benefit of the public good.

Methodology

To further understand how these relatively new concepts can be applied to the Australian Higher Education sector, a review of current literature has been summarised below. The literature reviewed examine both contemporary practices and current thinking both for arguments for and against this approach. By looking at the recurrent themes arising from this literature, these concepts are then considered with reference to our current higher education funding arrangements in Australia and consideration is then made as to how these concepts may be applied in that context.

Analysis and Results of Literature Review

a) What is a Human Capital Contract (HCC) and how does it work?

Palacios explained the concept and benefits of HCCs succinctly as follows:
"Under a human capital contract, a student receives funding in exchange for a percentage of his or her income during a fixed period of time. Human capital contracts

are equity-like instruments because the investor's return will depend on the earnings of the student, not on a predefined interest rate. The effects of these arrangements are, among others, less risk for the student, transfer of risk to a party that can manage it better, increased information regarding the economic value of education, and increased competition in the higher education market" (Palacios, 2002, p.1).

Another term used for these type of arrangements are "Income Share Agreements"(ISA), this title focuses more on the shared arrangement of investing in an individual's future income, as those who share in the person's success should also be rewarded with a share of that success as a return on their investment. The Wall Street Journal has described such agreements as "individuals selling stock in themselves"(Belkin, 2015).

In the United States legislation has been introduced to begin the regulation of such arrangements under the "Student Success Act" (US Congress CRS, 2014) whereby student loans would be capped at 30 years and a maximum of 15% of earnings. This legislation is currently seeking passage in respect of these agreements (Griswold, 2014a; Supiano, 2014) . Another important aspect of this legislation is that it is not regarded a debt instrument (US Congress CRS, 2014) which has the benefit for the student in terms of future borrowings and provides a level of security for the student.

Companies such as Upstart, Pave and Lumni in the United States are currently providing such financing and the terms are usually based on extensive algorithms to assess the potential risks and potential benefits of the individual being financed (Griswold, 2014b; Nisen, 2015; Surowieki, 2013). The investor is also encouraged to mentor and support the student, however the recent legislation places a prohibition on investors coercing or forcing certain actions or choices on the borrower (CRS, 2014).

The idea of advance funding by private investors for a stake in an individual's success is not new, for example the world champion boxer Muhammed Ali was financed by investors in his early years. These investors paid for his training and expenses in return for a share of his winnings (Surowieki, 2013). In the world of publishing it is not unusual for a book company to advance a writer funds in advance of the book being completed in anticipation of future reward (Surowieki, 2013). Although these examples are similar to the concept discussed, they are relatively unique situations which recognise rare talent.

The idea of income contingent loans are not new with such educational financing occurring in many countries such as the U.S.A, U.K, Australia and New Zealand but this financing is usually made by the government and not the private sector (Chapman, 2006).

The benefits of an income share agreement was well put by Holt (2013), when compared to private student loans which are common the United States.

"On a private student loan, my nominal monthly payment is fixed (sure, certainty is nice) but my income could change or go away altogether (making certainty just a monthly repetition of bad news). With an Income Share Agreement the converse is true: I don't know what my nominal monthly payment will be over the entire term, or how much I will pay overall, but I do know that I will always be able to afford it. Which would you prefer? I'll take the certainty from an Income Share Agreement"(Holt, 2013, np.).

Income Share Agreements are based similarly on the concepts surrounding income contingent loans such as the Higher Education Contribution Scheme HECS) in Australia, however they have a market approach. An insightful comment on the new Income Share Agreements was made by Surowieki from the New Yorker Magazine:
"Upstart may succeed or it may fail, but the principle behind it is unlikely to disappear. This isn't entirely a benign development. Income-based plans make it easier for students to repay their loans, but they also reinforce the idea that education funding is the responsibility of the individual rather than of the state. Still, on their own terms, they're a step forward. The old way of borrowing was predicated on a world in which the job market was stable and everyone had a steady income. That world of work is changing. The way we finance it needs to change, too" (Surowieki, 2013, np.).

b) Are income share agreements akin to a slavery model?
There are many commentators who view a Human Capital Contract or an Income Share Agreement in respect of the funding of higher education and other similar arrangements as a form of indentured service which is akin to a slavery model (Previti, 2013). Whilst a common mental image associated with slavery would involve chains and whips and harsh conditions, indentured slavery was generally associated with debt and the exchange of human labour for a set period of time (Oei, 2015).

The main objections centre on the availability of opt-out clauses over the course of the agreement (Nerlove, 1975) and whether the lender was able to exercise a level of control over the student that they had financed. The other considerations are whether the conditions are too harsh or unreasonable and whether students are being taken advantage of (Nerlove, 1975). These are reasonable concerns and some of these aspects have been considered in recent legislation in the United States, in particular the Student Success Act (CRS, 2014).

Some media commentators such as Kevin Roose from New York Magazine express their social concerns as reflected below and this implies that there may be an uneasiness toward financing where students pledge their future income:

"A year-old company begun by ex-Googlers that is giving young people in the post-crash economy the chance to indenture themselves to patrons in the investor class. It does this by making it easy for users to create human-capital contracts" (Roose, 2013, np.).

Oie & Ring (2015, p.714) believe that although there are no human property rights under such agreements, such property rights may be approximated under a financial agreement and that it is important to define some of the legal aspects and definitions in these agreements. This need for legal clarity appears to be a common theme in respect of ISA's (Kelchen, 2015; Oei, 2015; Supiano, 2014).

Some considerations per Oei & Ring (2015 pp. 714-716) in respect of these contracts which separate them from the notion of indentured servitude or slavery are as follows :

(i) ISA's do not force the borrower to work for them;
(ii) ISA's are a voluntary agreement;
(iii) Work performed is compensated;
(iv) The type of work performed is not specified.

c) Availability of investors and the issue of bankruptcy or refusal to pay

According to the Wall Street Journal (Belkin, 2015), the financing company Pave ran into problems in 2015 with carrying out this sort of arrangement, not due to student demand for the loans, as demand for their Income Share Agreements was exceptionally strong, the issue was the level of investor take up. Between 2012 and 2014 Pave received over 10,000 applications for funding, however they could only provide for 70 students. Pave found that the lack of legal clarity made it difficult for investors to commit to providing the capital funding (Belkin, 2015, np.). As there are only a few commercial providers, this does represent a potential difficulty for these types of funding arrangements. Whilst this is a current problem, the moves towards legal clarification in the United States may assist to improve investor confidence.

The other difficulty perceived by investors is surrounding bankruptcy, refusal to pay and income hiding or even declaring their true intentions for study.

"An ISA structure gives students incentive to be less than honest about their intentions -for example, saying they plan to become computer scientists but knowing they will go into social work" (Supiano, 2014, np.).

The issue of income avoidance to avoid debt has been well discussed by various commentators (McArdle, 2015; Nerlove, 1975; Oei & Ring, 2015; Supiano, 2014) when considering this area of financing. It should be noted at this point that in the Australian income contingent loan system, repayments are managed through the taxation system and the data is collected from tax returns and repayments made via tax deductions to cover the expected liability. This has proven to be an effective method for recovery, however as Income Share Agreements are generally in the private financing domain, such collection options are not available. The inability to definitively determine the share to be paid could be problematic and this increases the risk for potential investors.

(d) What are the community benefit concerns of ISA's and how are differing sectors and needs addressed?
As a general rule, in a capitalist society the free market will balance supply and demand to determine optimal pricing and provide a diversity of options in the market place. According to Yu & Salyards (2008) human capital models generally have difficulty in this arena as humans are less predictable than machinery or inanimate processes and therefore it is difficult to price in Capital Assets Pricing Models (CAPM).

Risk and return play an important consideration, as it does in a normal free market model. In terms of financing future graduates, the market for engineers and doctors, the risk and return factors will be completely different as will be the amount financed. Investors may reasonably prefer to invest in graduate careers which typically generate more income, than investing in graduates in professions which are typically lower paid. The lower the expected income profile, the higher the risk of default and the market will tend towards pricing that risk in the form of higher interest charges.

Palacios, the founder of Pave believes a market based approach will send the correct resourcing signal to the student:

"*Because ISA investors earn a profit only when a student is successful, they offer students better terms for programs that are expected to be of high value and have strong incentives to support students both during school and after graduation. This process gives students strong signals about which programs and fields are most likely to help them be successful*" Palacios, De Sorrento & Kelly (2014, p.1).

Whilst market forces may drive students to make good economic choices for their future, there is a concern about the social good aspect of education and whether this can be protected in a free market model. Whilst nurses and teachers are vitally important to the community, they are not paid as well as lawyers and accountants. Under a market based Income Share Agreement model there would be a tendency for those being trained in careers which are lower paid, to have their proportional repayments at a higher level. There is a sense of unfairness in this as there would be an additional risk loading which further compounds their lower salary profile and ability to pay. Widespread adoption of such a model could in time affect the supply of students entering these fields.

(e) Yale University Tuition Postponement Option
This Human Capital Contract concept was partially applied to the Tuition Postponement Option (TPO) introduced to Yale University. This program ran from 1971 to 1978 and was jointly contributed to by Tobin (President of Yale) and Milton Friedman (Harris, 2013). It was discontinued in 1978 when the government introduced alternative funding options for such students.

The concept was generally regarded as the first application of income contingent loans for education, however this was also similar to a Human Capital Contract.

The TPO levied the tuition cost for a cohort of students as a debt to that group of students. A percentage of income would be charged to all of the cohort until the debt was cleared for the entire group. This resulted in members of the cohort paying significant amounts due to the default of others (Harris, 2013). Those defaulting or with poor earnings resulted in a delay in the finalisation of the overall debt obligation, the debt burden of which fell onto the successful students. This arrangement was seen by the students as inequitable and the Alumni of Yale University more than 20 years later pressed for the closure of this arrangement and the write off of remaining debts.

The idea that successful graduates would help offset the costs of the unsuccessful graduates was part of the Friedman concept, but his idea was that this was not to be funded by the university itself (Harris, 2013). Under the TPO the debt was defined, attracted interest and the potential term of the contract was extremely long, in this case 35 years before the debt would be written off, whereas the Friedman concept had no defined debt value but was an income contingent payment over a shorter defined period (Friedman & Kuznets, 1945).

Whilst this scheme was generally regarded as a failure, it was an experiment which can be learned from. Despite the fact that this program had to be discontinued due to the protests from Yale's Alumni two decades later, the concept of income contingent financing was later revived through the Higher Education Contribution Scheme (HECS) in Australia and similar schemes in other countries such as the UK and New Zealand (Chapman, 2006).

(f) H.R.4436 - Investing in Student Success Act of 2014

This Act is important to the topic of human capital contracts, or income share agreements as it represented the first moves in the legal sphere in the area of these types of agreements. This legal move provides an indication of the public issues and the safeguards which were considered important. It provides what appears to be a clear set of guidelines for the protection of students.

In terms of a legal definition for an income share agreement, the following was submitted to US Congress as a definition of an Income Share Agreement:

"*An agreement between an individual and any other person under which the individual commits to pay a specified percentage of the individual's future income, for a specified period of time, in exchange for payments to or on behalf of such individual for postsecondary education, workforce development, or other purposes*" (CRS, 2014, np.).

The specific areas which were placed as guidelines can be summarized as follows (CRS, 2014):

(i) Agreements must specify the percentage of future income agreed to;
(ii) The first $10,000 of any year is exempt (indexed each year for inflation);
(iii) It must specify what is included as future income;

(iv) It must specify a maximum term and the act proposed a maximum period of 360 months not including any months where the borrower's income was below the minimum;
(v) No more than 15% of a person's income should be obligated under the agreement;
(vi) It should also specify the arrangements for early termination of the agreement;
(vii) Prohibits the lender to place controls over the borrowers' actions;
(viii) The agreement must clearly indicate that this is not a debt instrument.

(g) Review of the current Higher Education Contribution Scheme (HECS-HELP) in Australia

The HECS system was regarded as an innovative solution and it has been in operation since 1989 in Australia (Harris, 2013). There are many important principles which underpin this system, and these need to be considered in considering any alternative approaches. One of the important aspects of the HECS program was to re-introduce private contributions from students, whilst at the same time allowing access to university for poor but talented students (Chapman, 1996). In 2005 as part of the Higher Education Support Act 2003, this scheme which relates to students under Commonwealth Supported Places was renamed as the Higher Education Loans Program (HELP) and has now become known as HECS-HELP (Parliament of Australia, 2014). Some of the main principles of HECS-HELP are as follows:
(i) Income Contingent financing lowers financial barriers to entry for students who do not have access to funds for higher education, particularly for poor but talented students (Chapman, 1997, p.741).
(ii) Income Contingent financing provides a level of insurance for the student, should their career path be affected by unforeseen circumstances and their income not be what was expected, there is no requirement for contributions until they reach the average wage as was per the original scheme (Birch, 2008; Chapman, 1996, 1997).
(iii) Income contingent financing provides for students to still have capacity to have future borrowing capacity by only requiring repayments when above average income is earned (Chapman, 1997). Another important aspect is that repayment is payable on death or out of an estate, nor is it payable upon bankruptcy, it remains only payable on the student paying a future portion of their income after they reach a minimum wage level. These factors allow young graduates to be eligible to apply for finance. Concerns were raised early in the scheme that the education loans would delay students in starting families due to the financial burden and restricted borrowing capacity. These concerns raised by Davis (2005), were refuted by a comprehensive analysis in an article (Yu, Kippen & Chapman, 2007, pp.73-90).
(iv) As Chapman pointed out:
"HECS offers a form of 'default insurance', such that the former student does not have to bear the costs of reneging on their debt as a result of periods of low future incomes. This is quite different from a mortgage-style loan, in which the costs of defaulting may be very high in terms of being locked out of other capital markets

(most notably for housing) through damage to a person's credit reputation" (Chapman, 1997, p.742).

(v) Alternative schemes are available for upfront payment and subsidies are provided to reward and encourage that option.

(h) How are private fee charges determined in Australia?

The Australian undergraduate commonwealth funded places have two components which are determined by the field of education (FOE). The groupings of the fields of education determines the amount of government funding which is provided to the university for that student, and the maximum amount which the government will finance as a student contribution, which the government then manages.

For example, based on 2015 rates, a student studying to be a teacher will have a government contribution of $10,026 which will be paid to their university, and the university can set a fee for the student contribution to a maximum of $6152. The Government also pays the student contribution to the university and manages the arrangements for repayment. It should be noted here that nearly all universities in practice apply the full maximum student contribution.

In contrast a law student has a government contribution of $1961 and a maximum student contribution of $10,266 which shows a more inverse relationship between the private and government contributions. As an additional contrast, the high cost courses have a different variation again e.g. Engineering, and these relationships are shown in the table below.

Table 1: Commonwealth Grants Scheme (CGS) contributions 2015 –comparison table for Law, Education and Engineering

Subject field	Commonwealth Contribution	Maximum Student Contribution	Total Resourcing	Percentage Student Contribution
Education	$10,026	$6,152	$16,178	38%
Law	$1,961	$10,266	$12,227	84%
Engineering	$8768	$16,850	$25,618	66%

Source: Total resourcing for a Commonwealth supported place by discipline - 2015 (Australian Government, 2015).

Whilst the various student contribution rates are determined by the government as part of political negotiation, perceived needs and national priorities, there is a nexus between estimated future incomes and the amounts that students are expected to contribute. Generally, lawyers and doctors earn much more than teachers and this is reflected in the higher contributions for those fields of education. In addition, the total resourcing amounts also reflect the relative costs

associated with the delivery of programs, therefore law which is more classroom based is less resourced than engineering which has higher costs in terms of laboratories, internships and equipment and supplies.
Whilst it is difficult to find the guidelines for determining the basis of contributions, the basis was described by Duckett around the time of the Nelson review as:
"They incorporate the same mix of policy considerations: cost of courses and perceived private returns to education" (Duckett, 2004, p.218).

This aspect of the Australian funding arrangements is particularly relevant to this discussion as the level of contribution has a proportional relationship to expected graduate salaries, therefore the finance risk is reduced for those on lower anticipated career salaries, but reducing the amount that needs to be financed by those students.

Discussion: Would an ISA arrangement work in Australia?

The Australian HECS-HELP system is managed by the Australian Government and is not a private market based solution. The Australian Government as the financer of the student contributions bears the risks of unrecovered debt and this has been rising in the last few years and the level of write off is a concern for the government. According the Grattan Institute, the Australian Government finances around $6b each year in loans and it is expected that around $113m will be uncollectable by 2017 with approximately 17% which is considered to be doubtful debts, in other words they do not expect to obtain full recovery (Norton, 2014, p.1).

Graduates are unlikely to move away from these current arrangements as the HECS-HELP system provides a convenient and low risk method of financing in respect of the fees those students must contribute towards their higher education. If the current ICL arrangements remained unchanged, there would be little incentive to move away from this government based program, unless there was a viable alternative that was perceived to more advantageous.

In the United States the ISA's have in recent years gained interest due to the financing gaps in the US system as the government loans are not accessible to many and there are other perceived shortfalls and inequities (Palacios, De Sorrento & Kelly, 2014).

Income Share Agreements to date have not been part of recent reform discussions in Australia, however with the new interest in this style of financing for education in the United States, it may be useful to at least consider the merits of ICA'S and how these could be applied to meet Australia's needs. Australia would particularly benefit from this particularly if the funding burden and risk can be moved to the private sector. An increase in funding by private equity could potentially free up government funds for investment and this could potentially lead to increased development in the higher education sector.

Conclusion

Income Share Agreements are a form of Income Contingent loans and they have many of the same benefits in terms of providing access, lowering barrier to entry to university, allowing the student to pay when they can afford to make payments and so on.

The added benefit is these Share Agreements have the potential to move the funding burden away from the Government or the university and into the private sector, which is a significant outcome if achievable as it has the potential to free up funds for improvements in the sector.

The main difference is that some successful graduates will pay more than they would under the current HECS-HELP system in Australia, but this is offset by the fact those less successful could also pay less, but on balance students should be successful as a result of their higher education in terms of graduate outcomes and salaries and these benefits can provide the return on investment to lenders.

Another key difference is the defined period of the ISA, the current HECS-HELP arrangements continue until the debt is cleared and will index according to inflation to maintain the real value of the outstanding debt. By comparison an ICA potentially makes personal financial planning easier due to the defined nature of the financial arrangement (lessens uncertainties and therefore risk).

There are many factors to consider, particularly in the area of legal guidelines and protection of both investors and students, but some of this ground work is already being established in the United States. If recovery of ISA's and income determination for repayments was tackled through the taxation system in the same way the current HECS-HELP system works, this would lessen some of the investor concerns, however as this is a private market method of funding, a way forward would need to be negotiated. Income Share Agreements are relatively new, however further research into how this approach could be adopted in the Australian context may prove to be worthwhile, particularly if it could provide an innovative approach to Australia's higher education funding systems.

It should also be noted at this point that there is an element of income contingency in the student contributions in Australia. The level of contribution by the students (currently set as maximums for universities to charge) is reflective of expected graduate salaries, lawyers, doctors and accountants are expected to contribute proportionally more than nurses or teachers. One overall solution to funding may be to look at removing these notional contribution proportions and moving to a form of income contingent loans based solely on graduate income and providing the university funding proportion on more of a standardised cost proportion or other measure which would be independent of expected graduate ability to pay. From a funding management perspective, this would allow proper consideration of both funding components (government contributions and student contributions) rather than having these as a mix of different concepts i.e. direct cost, ability to pay and national priorities. These sorts of ideas as well as the legal frameworks behind such Income Share Agreements may be well worth further research. It is possible that within those ideas an improved process will be generated for the funding of education in Australia.

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