

Innovative Financing Models to Bridge the Education-Commerce Gap in Emerging Economies

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Abstract

Innovative financing models can improve educational institutions and enhance commercial viability and prosperity in emerging economies. Models such as these mitigate human capital deficiencies and foster entrepreneurship by making education, information, and matching finance available (Yuan & Powell, 2015). The broadening of the scope of financing instruments allows governments to develop solutions tailored to local development priorities. Innovation is often about rearranging parts to make something new. Funding activity can be stimulated by way of market design, institutional arrangements and financing models. Emerging economies are utilising financing models deployed elsewhere. We can learn from innovative practices in education and commerce, and change our financing. Some exemplary financing models can significantly enhance educational and commercial financing in developing countries in certain contexts.

Keywords: Innovative financing models, education-commerce linkage, emerging economies, blended finance, income share agreements.

Introduction

Education has been considered a significant engine for creating wealth and expanding the economy in modern as well as traditional societies. Yet, education is essential in the building of

new knowledge and the transfer of technology and industry expertise (Yuan & Powell, 2015). Education is even regarded as the most important intangible asset of a company for its sustainable growth, development and

innovation. If the industry fails to expand, the economy will also fail to grow. Emerging economies exhibit a significant financing gap in both the education and commercial sectors. The separation of education financing (which includes traditional funding sources such as university budgets, tuition fees, and student loans) and commercial financing (e.g. estate loans) is implied. The upstream section of higher education deals with issues such as: the training of talent, the cultivation and training of mentors, and faculty pre-research. There exists a tremendous financing gap with the commercial sector in the emerging economy. At least US\$500 billion (year 2011). Emerging economies face a crucial financing shortfall in the education and commercial sectors from both the public and private sectors. Summary of four types of innovative financing models creating educational and employment opportunities:

1. Outcome-based funding models or Pay-for-performance models. The government issues a pay-for-skills contract with a specific amount. Talent training possesses a contract and designs a training program. The government pays for the outcome rather than the input and implements flexible training to meet the requirement.
2. Blended financing for an education-industry model that provides

collaboration within education and industry partners in outreach, curriculum development, internship/practicum, R&D and capacity building. The blended financing educates scholars of education and industry to promote collaborative linkage.

3. Education-link income-share-agreement (ISA) providing tertiary learners a way to pursue post-secondary education unconditionally, without prior payments on tuition or examination, is proposed. Instead, graduates pay back a fixed percentage of their income within a pre-defined period of time. Governments can select only certain ISA Finance products.

4. Community savings and cooperative financing created by the community college introduce a cooperative financing model to support adult learners obtaining a post-secondary education. The City College of New York and Adult and Continuing Education in 2005 estimated an annual savings of almost US\$91 million.

Cooperative financing can provide a financing mechanism that is different from formal and longer-term loans. This cooperative financing mechanism can promote shared financing among learners.

2. Conceptual Framework

Education provides a path to economic opportunity; yet, insufficient linkage between education and commerce limits access. Education financing often prioritises initial access over ensuring that skills produced match labour-market demand. Internationally, the education sector contributed to economic crisis recovery during the last three decades by embedding human-capital investment in sustainable financing models; at the same time, further education was developed, often introducing new learner models that demand higher matching and collaboration. Pursuing high-skill education in higher numbers and blending education, particularly skills development and short courses, with financing and demand matching in the same phase has gained traction. Emerging-economy models often exploit the local environment to summarise current thinking on an emerging financing and institutional framework (Yuan & Powell, 2015).

3. Financing Gaps in Education and Commerce

Approaching an education-commerce bridge requires examining financing gaps. Too many policymakers and practitioners assumed education needed more resources, without analysing cost-effectiveness. Emerging economies face a vicious cycle where scarce skilled labour

hinders investments in advanced technologies, further reducing productivity and competitiveness (Kasat, 2010). Educational systems and institutions differ widely across economies. Spillovers from education systems emerge within specific contexts and cannot be readily transferred. Education systems transmit knowledge, not only at the individual level but also within societies. Financed either through public or private funding, education partly falls into the category of a public good; nevertheless, in most emerging economies, it, especially skills development, is inadequately financed via the market or state, creating a gap (M Nzila, 2014).

4. Innovative Financing Models

According to estimates, more than US\$300 billion is required each year to finance education in developing countries. According to the World Report, besides education, almost 100 million micro, small and medium-sized enterprises or MSMEs are in developing countries. It constitutes close to 90 per cent of all businesses and more than 50 per cent of jobs. They have a financing gap of \$5.2 trillion. The lack of correspondence between skills draws youth into job sectors, as well as those offering local employment opportunities and entrepreneurship, which hampers the availability of these skills to create the

required jobs and offer local opportunities. The innovation gap reflects a weak relationship between awareness of possible innovative solutions and development due to a lack of information, know-how, guesswork, and incomplete models. In addition, both gaps have been inhibited by insufficient investments and legacy funding models (Lennox et al., 2021). In many emerging countries, the demands of parenting require accessing and connecting to both economies. Unique ways and means of financing the various developments were provided in order that more opportunities to tap and connect both economies. Finance is important to all sectors of the economy. Several new financing models aimed to bridge the education–commerce gap were identified in 2016.

Two funding models are projected to open more implementation opportunities for an economy in an emerging country than other models. Implementation of a blended finance model that connects a fund with at least one enterprise involving an education and skills development unit and a public agency is expected to be easier when the connection to those enterprises is limited. Education-linked income share agreements are also expected to provide an opportunity for wider outreach and implementation in an emerging

economy. Authorised personal trainers or micro-business financing of at least \$3,000 would further enhance larger economy outreach for these financing models, and are preferred in education and training initiatives.

4.1. Outcome-Based Funding and Pay-for-Performance

Assistance with academic writing is not that simple. It needs a pretty significant amount of expertise. This is only more true for a two-stage writing process and the particularised adherence to scholarly conventions. That knowledge is here and available to assist.

According to the latest OECD Development Finance, emerging economies are under pressure to expand their human capital development systems for improved economic diversity, sustainable economy, and resilient economy. To improve the quality of education, tackle skills mismatches and expand education and workforce development access for underserved populations, the need for new policies is essential. Many countries are pursuing an approach that links funding to the achievement of targets (III Villarreal & Ruby, 2018; Saba, 2018).

Funding models can be arranged to link financing (grants, loans, etc.) to the organisation's achievement of the various educational results. Results

measuring employment or earnings of graduates can be a broader measure of the quality of education or workforce development. Developing economies are increasingly considering pay-for-performance financing regimes that tie financing to overall educational or skills development to further align incentives of higher education with the economy. Performance, or results-based funding, refers to the provision of funds for achieving certain objectives, outputs or results that can be measured against a pre-defined benchmark. One of the challenges to these approaches is the identification of relevant and appropriate indicators and the measurement of success.

Investing in human capital makes countries more resilient and inclusive. The education financing gap post-COVID-19 is estimated at almost USD 50 billion per year for low and lower-middle-income countries. Countries that can access IDA spend around 15% of public funds on education. Education accounts for a significant share of public funding in upper-middle-income countries that have large equity gaps.

4.2. Blended Finance for Education-Industry Partnerships

Public financing alone cannot bridge the persistent education gap-commerce partnerships are illustrated throughout

this report. Education and employment need financial resources, and blended finance is fundamental to catalysing value and growth across both sectors. Emerging economies can establish a blended finance model to create a hybrid education-skills fund that coordinates investment and support for multisector education-commerce partnerships. At least 13 countries are already implementing similar ideas (Lennox et al., 2021).

4.3. Education-Linked Income Share Agreements

Income Share Agreements (ISAs) expand access to education and reduce disparities in emerging economies. Under these contracts, students acquire financing for education or skills training in exchange for a fixed percentage of students' income for a set period after graduation. ISAs can bridge the education-commerce gap, increase the number of education providers, and cater to diverse student profiles. They align the interests between investors, education providers, and students. Transitioning from student to worker is smoother, as students pay only when they secure employment, often avoiding the uncertainty and risk that characterise other financing models. Adopting an ISA model at the country level can promote effective education financing. Emerging economies can establish national income-

share funds to enhance skills development and adapt education financing systems (Fadel, 2017).

4.4. Public-Private Venture Funds and Education Accelerators

Capitalising upon the success of business accelerators is a natural next step for public-private partnerships focused on education. By engaging the terrain of entrepreneurship, such partnerships can also facilitate the translation of research into commercializable products and ensure that new ventures genuinely address national needs. Governments are collaborating with business partners—often via foundations—to establish public-private venture funds that attract private equity investments in early-stage businesses poised to accelerate commercialised research from universities and research institutions. These governments also often underwrite the capital costs of incubators and accelerators. Such enterprise advancement accelerators, whether affiliation-specific, regional, or national, review applicants' technologies, market potential, and research bases; select and coach the most promising projects; help entrepreneurs shape ideas into viable business propositions; and connect them with venture capitalists. These programs further augment the growing number of private-sector-led initiatives to commercialise research, such as the

Coalition for a Better Archived Society (Saba, 2018), Open Technology Institute, Technology Transfer Central, and National Institutes of Health Commercialisation Assistance Program. Due to its capacity to close the education-commerce gap, commercialising research merits more emphasis than other dimensions of national innovation systems (Sreedharan, 2009).

4.5. Social Impact Bonds in Education and Skills Development

In recent years, Social Impact Bonds (SIBs) have emerged as an instrument that could potentially catalyse private investment in meeting education and skills development priorities. A SIB is a contract that establishes an outcome-based investment opportunity under which investors are to receive returns contingent on specified outcomes occurring generally of a social nature during a specified time period. SIBs can finance education initiatives, skills for jobs enhancement and strengthen education and industry linkages at an early stage. Improvement of learning and other outcomes through upskilling and reskilling, and better matching of education to jobs. SIBs can be implemented clearly in Agriculture, Digital Skills, Manufacturing, and other sectors that are applicable to national development plans and key economic corridors.

The recently published Education Outcomes Fund report provides various examples of SIBs deployed around the world, including the United Kingdom, Argentina, Australia, and Mexico, and presents a scalable financing model for financing education and skills development priorities. Emerging economies can benefit from a more targeted and efficient application of SIBs in the education and skills sector, leveraging the broad international experience of SIB implementation and expanding coverage to specific priority areas, sectors, and regions (Saba, 2018).

4.6. Digital Learning as a Cost-Reduction Mechanism

Digital learning systems are a cost-reducing mechanism for education financing. Emergence of greater adoption of learning platforms, especially due to the COVID-19 pandemic, is expected to reduce expenditures in the system, from curriculum design to hiring of expert instructors. Capex can be reduced through e-learning—a simulation-based education platform extending from vocational education to university courses—linked to internet deployment. Cost savings achieved through such digital learning can subsequently be used as inputs for outcome-based financing for the educational system. Beyond conducting classes, education systems

can generate revenues through learning portals, skill assessments, online training, and development of accompanying learning materials (Lennox et al., 2021).

4.7. Community Savings and Cooperative Financing

Cooperatives and savings groups are effective in closing financing gaps in education and commerce. These are savings groups that allow members to pull funds together to access money that is needed for businesses and skills development. This generates income for households. The mechanisms of cooperative groups and savings groups allow for financing to be distributed according to the earning potential of an individual. Under mutually agreed-upon community rules, funds can be saved and accessed through, and in most cases, candidates need to be supported by community members to access funds or help manage the funds. Mechanisms help to establish social capital. The approach, totally self-funded and managed, provides common access to education and enterprise development financing for both formal and non-formal skills development (M Nzila, 2014).

5. Institutional and Policy Enablers

In developing countries, innovative financing models can close the gap between education and commerce.

However, the successful application of such models depends on contextual factors that determine their suitability and feasibility (Lennox et al., 2021). An investigation of literature on relevant evidence-based financing models, together with their adoption in education, revealed the institutional and policy enablers that shape the support and uptake of these models. This refers to consideration of legal, regulatory, and taxation; data systems, evaluation framework and transparency; and coordination between government, academia and industry.

When deciding financing frameworks for education and skill development, national governments, regional authorities and supranational agencies should consider these enablers. This kind of framework can make use of innovative financial models; enhance linkages/back and forth mobilisation between education, training and the smooth school-to-work transition and mitigate unproductive pressure on the public financing budget; and promote broader, inclusive economic growth and societal development.

Innovative financing mechanisms require key regulatory, legal, and tax considerations to enable their use. The operational framework for many financing models, including how deployment occurs and how revenue

streams are captured and flow, is governed by regulations and laws. Tax incentives are key to stimulating private investments in education, as shown by the experience of Mexico, Jordan, and Mongolia. Furthermore, despite anticipating greater secrecy regarding revenue-risk financing models, transparency regarding funding sources and uses remains vital.

5.1. Regulatory, Legal, and Tax Considerations

Regulatory and legal barriers to the flow of capital between sectors, which may concern foreign ownership limits, tax treatment of inter-sector investments, and obligations that other sectors, such as the education sector, impose on the education sector's investees, impede financing model adoption. Constraints on foreign ownership or local matching contributions inherently limit the types of blended funds that can be raised, preventing the need and opportunity for blended finance to be addressed. Education-linked income-share agreements often face legal obstacles regarding their enforceability, free legal and clearly establishing a connection between the repayment obligation of the ISAs and income generation of the workforce-linked investee, without any risk of confusion with debt or loans. Movement of funds between the public and private sectors may be limited to

only educational-purpose transactions under public education, prohibiting socially-motivated enterprises from participating in financing arrangements when their primary goal concerns commercial ventures (Sreedharan, 2009). Tax benefits for social-purpose funds on principal, interest, or both may not be recognised in financing arrangements determined under industry partnerships. Clear tax treatment around revenue sharing and other financing arrangements receiving different concepts than traditional debt when engaged in education-industry partnerships greatly assists venture funds to accommodate such situations (Paola Bustamante I. & Kevin J. Fandl, 2017).

5.2. Data Systems, Evaluation, and Transparency

Various innovative financing models exist for education and industry partnerships that address different aspects of both parties' financing shortfalls. Nevertheless, effective evaluation of these new models requires strong data systems, performance evaluation frameworks, and transparent dissemination of the information generated through these systems. Governments must take steps to support these underlying requirements if they desire the education-commerce

financing gap to be addressed through innovative financing processes.

A strong education-commerce financing gap continues to exist in many emerging economies. Where their attempts to address this gap through traditional channels have not attracted adequate take-up, public authorities can encourage the use of a broad range of models that, in theory, address the gap. Nevertheless, there are many unknowns surrounding the available options. Empirical evidence remains limited, and viewpoints vary on the expected effectiveness of specific individual approaches (Lennox et al., 2021). Prioritising the systematic collection of comprehensive information is therefore critical. The existence of reliable data on financing arrangements, alongside assessments of their performance, can assist numerous stakeholders. This includes governments in targeting their instruments more effectively; potential users in making informed choices; and private donors, philanthropic foundations, and development banks in calibrating their anticipated contributions.

5.3. Stakeholder Coordination: Government, Academia, and Industry

To overcome the education-commerce gap, it is essential for government, academia and industry to dialogue and collaborate. The innovation process is

coevolutionary as the triple helix model describes the interdependence of the key players (Safiullin et al., 2014). Emerging economies may vary in urgency and perceived necessity of education-commerce engagement, but wherever there is a need for improvement, it will justify the costs of setting it up.

Many joint initiatives exist amongst the government, educational institutions, and the private sector. The skills training and manpower development collaboration takes place both in the formal and non-formal sectors. A government scheme may promote and encourage these partnerships through coordination mechanisms created at the national or regional level with representatives from each stakeholder group. Efforts of this nature have attracted considerable funding and yielded interesting proposals, indicating that the collaborative efforts are both important and feasible (Nkhangwelani Mafenya, 2013).

6. Case Studies from Emerging Economies

Innovative financing models can enhance economic development through the higher education-industry linkage in emerging economies, where education and career mobility are vital to eradicate poverty. However, education and training financing inadequacies remain

problematic. Innovative financing models that take education and employment outcomes as the basis for financing can release substantial resources to bridge this education-commerce gap.

6.1. Case Study A: Public-Private Education Fund in Southeast Asia

Public-private partnerships have emerged as a potential mechanism for narrowing the education-commerce gap in Southeast Asia, the region experiencing the highest economic growth in Asia at 6.2% (World Bank, 2018). Over the last two decades, several governments have sought to broaden private-sector participation in education by establishing public-private education funds that support the development of privately funded education systems that serve the disadvantaged. In 2009, the Philippine government established a Private Education Retirement Annuity (PERA) Fund to boost private school enrolment and broaden programme participation (Srivastava & Read, 2019).

Drawing upon the infrastructure development experience of the previous decade, private-public education funds have also emerged as a financing vehicle for education, science, and technology in South Korea, Thailand, and Vietnam. Borrowing from the industrial sector,

potential employment and income growth estimates are linked to education, and proceeds from the resulting bonds are channelled through partnerships with private education service suppliers to address the increasing mismatch between labour-market demand and the supply of educated guidance in Southeast Asia (Sreedharan, 2009).

6.2. Case Study B: Skills-Driven Pay-for-Performance in Sub-Saharan Africa

Effective workforce skill development is a key to reducing youth unemployment in much of Sub-Saharan Africa, and experience in various countries suggests that an evidence-based, skills-driven “pay-for-performance” approach can reduce risks for training providers while also establishing a financing mechanism. Multinational education companies such as Pearson and Bridge International Academies provide a model for such an approach by addressing affordability and skill development through a range of digital and face-to-face programmes, including those in collaboration with the private sector, local governments, and nonprofit partners. Skills-driven development partnerships based on this model, PSAs have been piloted in Burkina Faso and later in Tanzania, opening a new financing avenue for education and skills development in Sub-Saharan Africa (Saba, 2018).

6.3. Case Study C: Income Share Agreements in Latin America

Income share agreements (ISAs) have attracted growing attention as alternative higher education finance vehicles, and several initiatives are underway in Latin America. An ISA is a contract in which investors pay students' tuition or other expenses in exchange for a fixed percentage of their future income for a defined period (Fadel, 2017). Payments are generally capped to ensure students retain a significant income share and that repayment costs do not exceed the overall return expected by investors (A Zancolli, 2018). Payments are also suspended during periods of unemployment.

The ISA model provides potential advantages over traditional loans. Students benefit from lower initial costs, and arrangements are simpler for both students and investors in case of default, given their self-terminating nature. In addition, ISAs have been regarded as an ethical financial aid instrument, fostering the concept of education financing as “equity” capital.

7. Potential Impacts, Risks, and Mitigation

Emerging economies face the challenge of establishing effective education-to-employment systems that meet the needs of evolving economies (Lennox et al.,

2021). Innovative financing models can play a significant role in bridging the education–commerce gap. Drawing from recent finance experiences and innovative financing mechanisms in various sectors, several promising models have been identified for education, commerce, and the transition economy. They are especially relevant for the education–commerce gap because they offer creative solutions to existing financing constraints while enabling education to meet the evolving needs of the economy.

8. Methodology for Implementation and Evaluation

To increase the chance of successful adoption of an innovative financing model for connecting education and industry in a specific region of an emerging economy (e.g. Southeast Asia, Latin America, Sub-Saharan Africa), stakeholders should embark on the following seven-step approach (Srivastava & Read, 2019). Together with faster implementation, a careful implementation strategy that allows for timely, informed decision-making helps mitigate the risks of inadequate education and skills.

1. Identify potential financing models. Review the eight innovative financing models for improvements in education and skills training proposed in section 4

plus other models for connecting education with industry.

2. Conduct a problem or gap analysis. Determine the gaps in education and/or skills training that need to be addressed. Specify what educational levels (e.g. primary, secondary, post-secondary) are involved. Map the actors, stakeholders, and existing financing and funding arrangements in education and jobs in the region. Identify the underlying problems they face and the overall incentives and motivations of education systems and stakeholders.
3. Assess the candidates against the gap and problem analysis. Recommend only the models that address the identified gaps and problems effectively.
4. Investigate the selected candidates more deeply. Study how other countries, including countries in similar contexts and with a similar gap, have successfully adopted the promising models. Develop detailed recommendations on implementation for each selected model.
5. Explore the data environment for relevance and availability. Identify the most relevant variables for modelling and analysis of the selected candidates. Ascertain the availability and quality of the data.
6. Prepare a scoping study or concept note. Draw together the findings of the

previous steps into a short document outlining the gap, problem analysis, and financing models. Include a brief description of relevant data availability and information.

7. Prepare a more detailed proposal as necessary. Proceed with additional detailed modelling, data design and collection, or exploratory analysis of a promising model.

9. Conclusion

The study investigated innovative sources of funding addressing funding gaps impeding education-commerce linkages. Educational institutes can connect with commerce players via these models, lowering risk perception and enhancing financial access. The mechanisms include outcome-based funds, blended finance, education-linked income share agreements, public-private venture funds, social impact bonds, digital learning as a cost-reduction mechanism and community savings and cooperative financing across rural-urban, small-medium and trade-manufacturing divides. Implementation will require institutional and policy enablers: regulatory, legal and tax; data, evaluation and transparency; and stakeholder coordination among government, academy and industry. The emerging economies are also reflected in the review. It includes Southeast Asia,

Sub-Saharan Africa and Latin America as examples for model implementation.

These models could have a significant impact in different realms of education. Connecting funding with proven outcomes can enhance knowledge, skills, placement, and earnings in education, commerce and youth-skills-commerce linkages. Facilitating placement drives in schools and linking commerce with job-provision investment enhances knowledge-economic transition. Furthermore, delivering e-learning devices to out-of-school youth to increase knowledge acquisition can narrow down the school-to-work gap. Models can also create demand shortfalls, governance challenges and delays in graduation. The specific conditions under which mitigation measures work are critical; for example, in emerging economies, where the responsibility is being pushed away from government and put onto private investors, if placement of jobs confirms the transfer of skills. Therefore, a clear articulation of core objectives, strategies, stakeholders and needs of the target group, expected results, and implementation modalities is essential. (Lennox and coauthors, 2021)

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