# ChildFinance A Literature Review

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## A Word of Thanks

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## Executive Summary


Financial education and financial inclusion programmes for children and youth are becoming an ever more popular form of development intervention. Evaluations of these programmes tend to show mixed results however. While there is some evidence that shows a positive link between these interventions and a more financially capable population, others show mixed results or no correlation at all. The main purpose of this paper is to provide a brief summary of the impacts and outcomes associated with providing children and youth financial education and access to financial products. This can then serve as a basis for future research that can be replicated and compared with other studies.

Research on financial education tends to be dominated by the developed world and has shown mixed results. Some studies have shown that youth who undertake courses in financial education tend to score significantly higher on standardized tests and greater levels of asset accumulation as the youth transitions into adulthood. Conversely, other studies suggest that financial education is having little to no effect when the programme targets youth (ages 15-24). Some researchers have theorized that this is primarily due to the target age of the intervention and were not necessarily questioning the validity of the programme, simply feeling it wiser to target children as opposed to youth.

The research on financial inclusion in the developed and developing worlds, though rather limited, tends to overwhelmingly support the hypothesis that financial inclusion programmes lead to greater financial literacy. In the developed world increased levels of savings and asset accumulation have been correlated with the programmes as well as more ambitious personal goals for the future. In the developing world greater savings and asset accumulation were again found, but also correlated with the programmes are better levels of nutrition, more positive attitudes on gender and lower instances of transaction sex amongst participants.

While the results of existing studies on financial education and financial inclusion tend to be positive, much of the data are not comparable due to differing definitions used for basic terms, different outcomes being measured and incompatible success indicators. In order to ensure the comparability of future studies, uniform definitions of key terms, measurement techniques and outcomes need to be established and agreed upon. To that end this report, through the input of the ChildFinance academics working group, attempts to set down clear definitions, indicators and outcomes and point out the gaps in the literature that must be filled in order for this development intervention to be proven successful.


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## Introduction

Financial capability. Financial literacy. Financial inclusion. These are all terms used to describe various outcomes of youth financial education and financial access programs. There is some evidence that has found that a financially capable population can have positive impacts on their families and communities' wellbeing (Hogarth,2006). Other evidence has shown mixed, limited or no impact of programmes. A key question and debate surrounds both the definition and the measurement of these concepts. This report seeks to provide a snapshot of the current literature about the definitions and the impacts and outcomes of providing children and youth with financial education and access to appropriate financial products. It does this through a systematic review of the literature, found in the appendix, that examined the evaluation, policy, and economic literature on financial education and financial inclusion studies that involved children in both developed and developing countries. It does not look at the literature on financial education and inclusion of adults, except where research on children is extremely lacking. The paper, when possible, details the outcomes, indicators and results in this literature but does not judge their methodological rigor as the goal is to identify potential indicators, and outcomes that can be used in future research on the impact of ChildFinance related initiatives. It shows that there is good research and consensus in some areas but that large gaps, both in theory and evaluative practice, are prevalent.

The paper is ordered in a way to provide an overview of the issues to researchers or academics. It is structured along the following lines. First, it provides an overview of the definitions of the key terms used in the literature, along with a brief synopsis of the arguments around these definitions. Each of these key terms borrowed from the literature have been further contextualized to ensure congruency with the aims of the ChildFinance movement. The second section gives a detailed look at the rational/theory of the intervention area, the results of the research, the ChildFinance theory of change and the indicators used to measure programmes in each area. Based on this review, general themes and gaps are identified and detailed and the paper concludes with the key questions and areas of potential future research.

## Key Concepts and Relationships ChildFinance

The first ever conference on ChildFinance held in 2010, defined ChildFinance as a movement to support "the creation and strengthening of systems, structures and policies which provide children with choices, instill them with values, empower them to make sound financial decisions, build their assets and invest in their own futures" (ChildFinance International, 2010). Essentially, the movement seeks to improve the financial capability of children and youth internationally.

### Children and Youth

The United Nations defines children to be people under the age of 14 and youth to be people between the ages of 15 and 24 years old (The United Nations). A child is also defined to be any individual under the age 18 according to Article 1 of the United Nations Convention on the Rights of the Child. Therefore, youth aged 15 to 18 are not excluded from the rights awarded children by the convention (The United Nations). The convention describes the basic human rights that children everywhere have as "the right to survival; to develop to the fullest; to protection from harmful influences, abuse and exploitation; and to participate fully in family, cultural and social life" (UNICEF, 2008).

The ChildFinance academics working group voiced their agreement with these internationally recognized definitions and vowed to work within them in the future.

### Financial Capability

There is no commonly accepted definition of financial capability but it is described by the YouthSave Initiative as "The combination of knowledge, skills, attitudes, and especially behaviors that people need to make sound personal finance decisions, suited to their social and financial circumstances" (U.S. Treasury Department; FINRA Investor Education Foundation, 2009).

Johnson and Sherraden (2007 ) define financial capability as being more than just financially literate but also the ability to function fully in the financial system. "Participation in economic life should maximize life chances and enable people to lead fulfilling lives. This requires knowledge and competencies, ability to act on that knowledge, and opportunity to act. This involves linking individual functioning to institutions. It also involves use of pedagogical methods that enable people to practice and gain competency in this functioning". (Johnson and Sherraden, 2007, p.6).

The Center for Financial inclusion defines financial capability to be "the combination of knowledge, understanding, skills, attitudes and especially behaviors which people need in order to make sound personal finance decisions, suited to their social and financial circumstances" (2008).

These three definitions seem to agree that financial capability is the ability to utilize effectively the available financial institutions, systems, and resources.

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The academics working group felt that capability within the ChildFinance movement refers not only to financial, but also to social capability. The academics agreed upon the following term in order to reflect this:

Socio-financial capability- the ability to make informed financial decisions that benefit the individual and the community.

### Financial Literacy

Like financial capability, financial literacy has no authoritative definition. Financial literacy has been described as the ability to make use of financial education (Baron-Donovan, Wiener, Gross, & Block-Lieb, 2005). The center for financial inclusion defines financial literacy as "the ability to understand how to use financial products and services and how to manage personal, household, or micro-enterprise finances over time. "Improvements in literacy levels can be achieved through financial education" (The Center for Financial Inclusion, 2008).

The National Foundation for Educational Research defines financial literacy to be "the ability to make informed judgments and to take effective decisions regarding the use and management of money" (Godsted & McCormick, 2006, p. 3).

The definition of Financial Literacy used by the New America foundation and designed by Vitt et al 2000: it is "the ability to read, analyze, manage and write about the personal financial conditions that affect material well being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect everyday financial decisions, including events in the general economy" (Parrish & Servon, 2006, p. 2 ).

Australia's National Consumer and Financial Literacy Framework (NCFLF) related financial literacy with youth empowerment: "Consumer and financial literacy is important for all young people to empower them to make informed consumer decisions and to manage effectively their personal financial resources" (Consumer and Financial Literacy Working Party, 2005, p. 2). The paper goes on to define consumer and financial literacy as "the application of knowledge, understandings, skills and values in consumer and financial contexts and the related decisions that impact on self, others, the community and the environment." (Consumer and Financial Literacy Working Party, 2005, p. 1).

Drawing upon these interpretations, the ChildFinance academics working group defines financial literacy as the basic knowledge, skills and attitudes needed to make effective financial decisions and is gained through education and/or life experience.

### Financial Education

According to Fox, Bartholomae, & Lee "Financial education can include any program that addresses the knowledge, attitudes, and/or behavior of an individual toward financial topics and concepts". (2005, p. 1). Another definition of financial education, used by Hogarth is more specific. According to Hogarth, financial education can have any of three features: "(1) being knowledgeable, educated, and informed on the issues of managing money and assets, banking, investments, credit, insurance, and taxes; (2) understanding the basic concepts underlying the management of money and assets (e.g., the time value of money in investments and the pooling of risks in insurance); and (3) using that knowledge and understanding to plan, implement, and evaluate financial decisions" (Hogarth J., 2006, p. 3).

The Center for Financial Inclusion states that financial education is important in the context of financial inclusion because as previously excluded populations gain access to formal financial services they need to be able to use these services in a productive and responsible manner that will not cause them harm. Financial education may be provided by schools, financial institutions, and others, through channels ranging from classrooms, to mass media and direct contact with financial institution staff" (2008). How is financial education different from literacy? According to Martha Henn McCormick of the Networks Financial Institute, "literacy is the possession of basic knowledge or competence, and education is the means to build that capacity" (2008).

ChildFinance defines financial education as a program or product aimed at affecting knowledge, attitudes, skills and behaviors toward financial topics and ideas.

Additionally, there are some scholars that suggest financial education must also encompass elements of moral education and instill values in children that will lead to better financial behaviors in the future. It is believed that "by affecting the beliefs, values, and habits of children at an early age, we can permanently alter certain behavior, for example, habitually saving money" (Holden, Kalish, Scheinholtz, Dietrich, & Novak, 2009). Further, "Interpreting moral issues in financial education requires both behavioral and intellectual considerations. Students should both understand and practice principles of moral conduct. Such processes both develop the ideals necessary to foster respectful attitudes towards all societal members and

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encourage the processes for supporting them" (Lucey, 2007, p. 490). Lucey goes on to say "a complete financial education curriculum involves more than providing young consumers creditors, and investors with financial strategies; it should explore the human connections it lacks. This process requires that teachers facilitate student-centered processes to encourage dialogues which examine the dishonest and inaccurate judgments related to financial differences" (p. 492). The other definitions of financial education do not explicitly incorporate moral and value education into the definitions and perhaps they should.

Recognizing this shortcoming in the literature, the ChildFinance academics working group felt it necessary to provide a definition of social education for the benefit of the movement.

Social education is a program or product aimed at affecting knowledge of children's rights, encouraging self-reflection, self-awareness and respect for others and for oneself.

### Financial Inclusion

Implied by the definitions presented of financial capability and literacy and in accordance with several studies, financial education alone may not be enough to generate the sought after impact of financial capability. In addition to having financial knowledge, there must also be the opportunity to apply the knowledge learned (MasterCard, 2010). This requires access to financial products and services.

Full financial inclusion is considered by The Center for Financial Inclusion to be "a state in which all people who can use them have access to a full suite of quality financial services, provided at affordable prices, in a convenient manner, and with dignity for the clients. Financial services are delivered by a range of providers, most of them private, and reach everyone who can use them, including disabled, poor, rural, and other excluded populations" (The Center for Financial Inclusion, p.1). Children, as will be shown in this review, are active economic participants who can make use of financial inclusion, and should therefore, according to this definition, have access to all that full inclusion entails.

Drawing upon these sources a simple definition of financial inclusion was agreed upon: a means of safely accumulating, controlling and spending assets.

### Asset Theory

Financial education programs and inclusion initiatives hope to improve the financial literacy and the financial capability of people. Once capability is attained, it is believed asset accumulation will occur. According to Asset Theory, the accumulation will have a number of positive effects on the individual, household, and potentially the community. The positive effects include behavioral, psychological, social, and economic changes (Sherraden, 1991). Consequently, in theory, economic development is attained. "As a result, savings products, policies, and programs that are specifically designed to facilitate a child's accumulation of assets at an early age are increasingly considered a viable option for motivating young people to enter formal financial systems, build assets in their youth and throughout their adult lives, and ultimately lead to economic and social advancement for themselves and their families" (Meyer, Zimmerman, & Boshara, 2008, p. 2). Research on the impact of asset theory based policies show that the theory may in fact be correct under the circumstances studied (i.e. Guo, Huang, Zou, & Sherraden, 2007).

### Conclusions

Financial literacy allows individuals to take advantage of opportunities to better their economic wellbeing in many ways. For example, the benefits of financial education and inclusion have been shown to enhance the success of youth entrepreneurs (OECD, 2009). Good financial decisions can lead to other positive outcomes such as increased levels of education, asset accumulation, and generational knowledge transfers and generate an economic ripple in society. It is certain these concepts are interrelated yet there are no widely accepted definitions that easily distinguish the relationships.

## Financial Education

### Why Financial Education?

In both developing and developed countries children and youth receive income as earnings and/or gifts and allowances which place them in the positions of economic agents and not immune to the issues this may entail. Easily influenced by media, family and peer pressure, children and youth with spending power are especially vulnerable to making poor financial decisions and developing poor financial habits (McCormick M. H., 2008). Financial education seeks to reduce the economic vulnerability of children and youth by arming them with the knowledge to make good financial decisions and counterbalance the negative influences on their financial behavior. When coupled with values-based education, financial education can teach children to approach dilemmas with humanistic principles, rather than on only economic (Lucey, 2007).

### State of the Research

In both developed and developing countries there is a wide range of research on the effectiveness of financial education on the financial knowledge and behaviors of children and youth. In the U.S. much of the evidence

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points towards the positive effects of such programs. A study by Tennyson and Nguyen found that in American high schools "students in states that required specific financial education course work scored significantly higher than those in states with either a general mandate or with no mandate" (2001, p. 1). Another study on American high school financial literacy mandates found evidence that "mandates have raised both exposure to financial curricula and subsequent asset accumulation once exposed students reached adulthood" (Bernheim, Garrett, & Maki, 2001, p . 1). A study by Hogarth, Hilgert, & Schuchard (2002) found evidence that financial knowledge and education is associated with better financial behaviors among adults. Further, a high school financial planning curriculum was found to have positive impacts on students' financial behaviors, knowledge, and self-efficacy (Danes, Huddleston-Casas, & Boyce, 1999). A last example is a study on a financial education seminar which is shorter than a full course curriculum effectively increased students' financial knowledge, increased responsible attitudes towards credit, and decreased avoidant attitudes towards credit (Borden, Lee, Serido, & Collins, 2008).

In contrast, other studies have concluded financial education in high school does not lead to better financial management behaviors or improved financial knowledge. A study by Lew Mandell (2006) found that five years after taking a high school financial literacy course, students were no more financially literate, nor had better attitudes towards thrift or financial behaviors than students who had not taken the course. Another study by Mandell with Linda Klein came to the similar conclusions (Klein & Mandell, 2009). Robb and Sharpe (2009) found that college students who had higher levels of financial knowledge had an insignificantly different probability of holding a credit card as less financially knowledgeable students and also held significantly higher balances on those cards. Finally, a large study on high school financial literacy programs refutes the findings of Bernheim et al and instead found that the programs had no significant impact on behavior (Cole & Shastry, 2009). Some have theorized that this ineffectiveness is due to the fact that financial education reaches students too late in life (Godsted & McCormick, 2006). Teenagers, claim proponents of this theory, are less receptive to financial education because they have already developed financial habits that are difficult to correct (Mandell, 2009). Holden, Kalish, Scheinholtz, Dietrich, & Novak (2009) propose that the solution is to target children for financial education rather than youth: "By affecting the beliefs, values, and habits of children at an early age, we can permanently alter certain behavior, for example, habitually saving money".

In the developing world there is a relative dearth of research on financial education for children and youth. Aflatoun, a non-profit supporting a child social and financial education program currently operating in multiple countries around the world has found a positive association between financial education and financial literacy (Aflatoun). Although the research is limited, the need has been recognized and is currently underway in this field. The Poverty Action Lab will be evaluating the impact of education, including financial, and training on the economic empowerment of young women in Tanzania and Uganda (Rasul, –et al., 2010). Another evaluation will be conducted to measure the impact of the Siyakha Nentsha financial literacy, HIV/AIDS and reproductive health education program on the lifelong functional capabilities and well-being of youth in South Africa (The Population Council, 2007). Finally, Freedom from Hunger is about to launch a large project called Advancing Integrated Microfinance for Youth (AIM Youth) in Equator and Mali which will provide microcredit and financial education to youth (Freedom from Hunger).

### Impact Indicators

From the research gathered on financial education program evaluations in developed countries (see Appendix B) there is a clear theme in the indicators used. The indicators fall under three categories: attitudes, knowledge, and behaviors. Attitude changes are commonly measured by comparing pretest attitudes with post test attitudes on topics such as the importance of money management and education, students' financial goals, and student's changes in their intentions to save and borrow. Knowledge gained from the intervention is usually calculated by comparing pre and post test scores on financial topics such as the cost of living, credit, and auto insurance and also questions on banking and investments. The most common indicator used for long lasting impact of financial education is behavior change. Behavior changes are often measured best in longitudinal studies that conduct surveys after months or years of the intervention. Surveys on behavior changes focus on participants' net savings, net worth, adequacy of savings, and overall portfolio. These surveys also look at the lasting changes of financial practices of participants, such as comparing prices, writing down goals, managing credit, and spending patterns.

Although there is little current research on the impact of programs that exclusively teach financial education programs in developing countries, the ongoing research provides some clue as to what indicators are in use (see Appendix C). The Aflatoun program in Meljol measured children's rates of saving and the uses of those savings to gauge how effective the savings will be for their development (The study found that 65% of

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the children used their savings to purchase supplies for school) (Aflatoun). Aflatoun program evaluations specifically look at children's saving and spending patterns, practices of financial planning and budgeting, and also the development of children's social and financial enterprises (Aflatoun). The Population Council will research the impact of the financial education component of an ongoing program by measuring participants' economic literacy, skills, and aspirations (Rasul et al., 2010). Although there are too few studies cited to make conclusions about the themes of indicators used to measure the outcome of financial education, it is likely that it will follow a similar patterns as those used in the United States. A major difference comes from the Aflatoun emphasis on child social and financial education which have not been a focus of financial education in the U.S. The experience of the Aflatoun model and the theoretical argument for rights-based education by Lucey (2007) suggest that an additional indicator of impact should be designed to measure the moral development of financial education students.

### Conclusions

It is evident from the research that financial education of children and youth among developed countries is concentrated in the United States. Further research must be conducted in other developed countries to make any cultural comparisons or general statements about the effectiveness of financial education in developed countries. Research is also necessary to identify the causes for disagreement on the effectiveness of financial education within the U.S.

Additionally, there is a clear deficit in research on the impact of exclusively financial education for children and youth in the developing world. As will be illustrated in the next section of this paper, financial education is often combined with saving and other inclusion schemes. This combination is an important intervention to study but it cannot be assumed that the impacts will be the same for a program restricted to only providing financial education. However, the research findings on combination interventions are encouraging. Further research is needed to understand the potential for financial education to effectively improve the financial literacy of children and youth in developing countries.

## Financial Inclusion

### Barriers to Formal Financial Inclusion

Research shows that financial exclusion is widespread in developed countries and especially so in those with high levels of income inequality (Carr & Schuetz, 2001; Kempson, Atkinson, & Pilley, 2004; Collard, Kempson, & Whyley, 2001). Financial exclusion is especially a problem for low-income families. "Many low-income children and their parents lack checking or savings accounts, investments, insurance, and access to employment-based retirement savings" (Johnson & Sherraden, 2007, p. 8). This is concerning because children from such families do not benefit from early exposure and access to formal financial systems (Johnson & Sherraden, 2007; The Financial Services Authority, 2000). Furthermore, research suggests that like the elderly and low-income, children and youth are disproportionately unbanked when compared to the rest of society in developed countries (Kempson, Atkinson, & Pilley, 2004; Atkinson & Kempson, 2004) The barriers to formal financial inclusion in developed countries include cost, inappropriate products, location, regulatory impediments, self-exclusion, and lack of information (Kempson, 2006).

In developing countries, the barriers to financial inclusion are considerably higher than in developed countries (Beck, Demirgüç-Kunt, & Soledad Martinez Peria, 2006). In addition to the usual barriers facing low-income adults, such as fees and restrictions, identification requirements, and inconvenience, youth in developing countries must also contend with fewer product options, legal restrictions, and lost control over their savings (Hirschland, 2009). Due to these restrictions, inclusion in developed countries remains low among the most disadvantaged groups, including children and youth (Beck, Demirgüç-Kunt, & Honohan, 2008).

### State of the Research

There is abundant evidence of the positive effects of access to financial products and services in the U.S. and in the U.K. (i.e. (Ng, 1983); (Elliott, Jung, & Friedline, 2010); Bernheim, Garrett, & Maki, 2001). Other studies show that providing accounts with incentives, such as individual development accounts like the SEED program in the United States and the discontinued Child Trust Fund initiative in the U.K., is an effective means to foster good financial behavior (Sherraden & Clancy, 2008) (Scanlon & Adams, 2009). These programs seek to improve savings habits practices of the family and child and thereby "facilitate financial education, increase economic opportunity, promote social development, and begin a lifelong process of asset accumulation" (Cramer, 2010 p. 1 ). Individual development accounts are supported by the institutional theory which claims that savings is a function of clients' access, information, incentives, and facilitation, all of which are improved in the presence of a financial institution (Beverly & Sherraden, 1999).

In the developing world, financial inclusion programs take a different shape than in the developed world. The financial inclusion efforts seek to improve financial capability by providing or improving the poor's access to financial



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products services. The MasterCard foundation (2010) summarizes the theoretical implications of financial inclusion:

"substantive financial inclusion encompasses more than simple access to financial services; it requires the educated and savvy use of these services, or financial capability, among clients. Promoting youth savings could therefore also enhance financial inclusion by increasing young people's knowledge of and experience with financial services, inculcating good habits when they are relatively easier to form" (p.4).

While there are some programs that offer matched savings accounts (i.e. Ssewamala, Han, & Neilands, 2009 in Uganda), often development programs for youth offer a savings scheme (matched or not) with some financial education and/or other services included (i.e. Mensch, Grant, Sebastian, Hewett, & Huntington, 2004 in India, Austrian, Ngurukie, & Sakwa, 2009 in Kenya, and Chowa & Ansong, 2010 in Uganda). There are also some programs only offering saving schemes (i.e. (Erulkar & Chong, 2005) in Kenya and Kalyanwala & Sebstad, 2006 in India). While savings seems to be the most popularly offered product to children and youth in developing countries, there are some programs that provide a wider range of financial services (i.e. (Catholic Relief Services, Rwanda, 2009), (Kashfi, 2009) and Ahammed, 2009 in Bangladesh). All of these programs provide access to financial services in some form in an effort to improve financial capability of children and/or youth.

Efforts to improve financial inclusion are not without criticism. Helen Pankhurst argues that savings and credit schemes cannot compare with the positive impacts of financial literacy programs (2002). Others warn that providing access to financial services to children and youth may create a bigger ethical problem than the one it seeks to solve (Vanroose, 2007). Providing access to financial services will certainly increase the number of children and youth at risk to formal debt and exploitation by financial institutions, but that does not necessarily mean the risk itself will change. These concerns highlight the need for financial regulation and education to accompany inclusion in order to protect vulnerable children and youth.

### Impact Indicators

The impact indicators used in these studies in the developed world focus on the ability of accounts to improve savings, alter beliefs and future orientation, and behaviors (see Appendix D). Family rate of savings is measured as well as when and where families open accounts, their levels of participation with the accounts, and their awareness of financial institutions (Aspen Institute, 2007) (Sherraden & Clancy, 2008). The SEED OK project will measure parents' attitudes and aspirations for children's education and parents' behaviors regarding education children's aspirations for education (Sherraden & Clancy, 2008). The study will also measure's the impact of the program on children's early schooling performance and children's knowledge, cognitive, and behavioral development. In another study of the impacts of SEED accounts, the authors sought to measure the "psychological, behavioral, and social impacts of savings-program participation" (Scanlon & Adams, 2009). The indicators used in this research included fiscal prudence, view of self, future orientation, sense of security, financial knowledge, family interactions, and community involvement.

The indicators used to study the impacts of these diverse programs in the developing world vary greatly because of differing goals and services of the programs (see Appendix E). Like the indicators used in the developed world, savings and assets are the most common indicators. However, many indicators, such as use of transactional sex, group membership, nutrition, and attitudes on gender, are contextual and more useful in some developing country setting than in a developed location. A common indicator used in developing countries is self-esteem or confidence, signifying the importance of asset building to the personal development of youth clients. In the developed world much of the inclusion efforts of the programs are directed towards children whereas youth are the primary focus in the developing world. This difference in objectives accounts for much of the differences in indicators. There is no widely accepted distinction between children and youth and further research should be conducted to identify the distinction and the appropriate programs for children and youth respectively.

### Conclusions

The research in both developed and developing countries seem to overwhelmingly support financial inclusion of children and youth as a means to improve financial capability and well-being. However, the studies in developed countries focus too narrowly on the benefits of matched savings accounts at birth and are geographically limited to the U.S. and U.K. More research is needed to make conclusions about the benefits of other types of financial inclusion efforts and at a greater age range. Further, it will be important for academic and market research in developing countries to distinguish which products and services are most appropriate for different ages and contexts.

## Other Themes

### Age

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Children and youth will respond to interventions in different ways at different ages. However, there seems to be inadequate research on the importance of age as a factor relating to the effectiveness of financial interventions. A study of Israeli children aged 8 – 15 sought to understand how children develop an understanding of economics (such as inflation, role of governments, banking and investment, etc) at different ages (Leiser D., 1983). The study found that children develop an understanding of economic concepts but it is not until about age 11 when children develop economic reasoning skills that allow them to understand economic systems that cannot be understood on a conceptual basis alone. A study of boys in Hong Kong found that by age 6 boys have an understating of shop profit and by age 10 a full understanding of the bank (Ng, 1983). Finally, a third study conducted of 1,279 American students in grades 5 through 9 that had received financial education found that the education had stronger impacts on the knowledge and attitudes of younger students than on the older students (Mandell, 2009). These studies, and research like it, will help practitioners develop age-appropriate financial education and inclusion program models.

### Gender

Current research on the relationship between gender, financial literacy and education suggests that male and female students behave and learn differently in the realm of personal finance. A study conducted in the U.S. surveyed 5,329 high school students that completed the same financial literacy course to understand how gender differences influenced financial knowledge, self-efficacy, and behavior after studying a financial planning curriculum. The study found significant differences between genders, specifically that "male teens reinforced their existing knowledge, whereas female teens learned significantly more about finances in areas in which they were unfamiliar with prior to the curriculum" (Danes & Haberman, 2007). A study by Mandell (2009) of American children in grades 5-9 found that the female students displayed better savings behaviors than male students. A greater understanding of how gender influences financial literacy should increase the effectiveness of programs aiming to improve financial capability.

### Geography

A study by Leiser, Sevón, and Lévy (1990) of the economic socialization of children in ten different countries is one of seemingly few sources that make any cross cultural and geographical comparisons. The study used questionnaires to categorize children's understandings of economic concepts, ability to understand the consequences of national-level economic events, and attitudes towards individuals' economic fates. The study found the cross-cultural differences harder to interpret than trends in age. While children's understanding of economics followed a similar pattern, reasoning abilities and attitudes showed greater variety across countries. The authors suggest that differences among children's responses within the same age group, and thus cognitive ability, are attributed to institutional and cultural differences across countries. No conclusions were made about the precise circumstances that shape these different attitudes and reasoning abilities. In the theme of geography, there are few cross-national studies and a serious lack of research on the significant cultural factors that influence economic socialization. Comparative research of this sort would help practitioners and academics understand the underlying cultural themes that impact the success of financial education and inclusion interventions.

### Role of Parents

"The family is the context in which children learn about financial knowledge, attitudes, beliefs, and practices, although not always purposively. Parents are the primary agent for financial socialization. However, if financial educators are to promote more purposive financial socialization within families, they must become aware of the perceptions of parents as to when it is appropriate to do so" (Danes S. M., 1994, p. 132).

Danes highlights the importance of the last identified cross-cutting theme: the role of parents in children's economic socialization. A study of families in Holland found "that parental behavior (such as discussing financial matters with children) and parental orientations (conscientiousness, future orientation) have a weak but clear impact on children's economic behavior as well as on economic behavior in adulthood" (Webley & Nyhus, 2006, p. 140). Another study conducted in the U.S. compared teens and their parents' financial knowledge found a strong relationship between the two (Bowen, 2002). In a study of American families, Lewis Mandell found that children who received financial instruction from parents scored no higher on financial literacy tests than children of parents who did not provide financial instruction (2001). The extent to which children receive economic socialization from parents remains unknown. Also unknown is the effectiveness of financial education programs to reverse the negative economic socialization some children receive from their families. The role of parents is an understudied factor in economic socialization which should be further developed.

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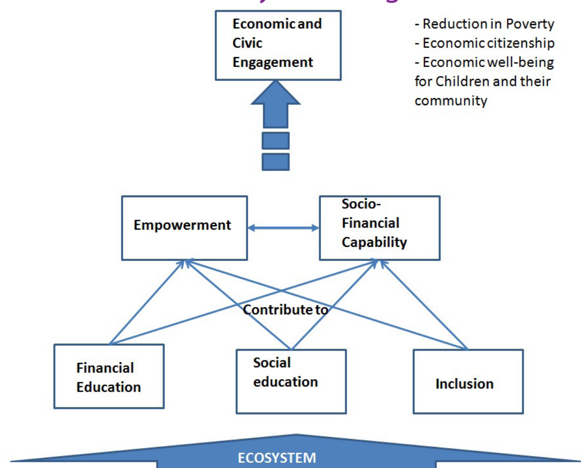
## ChildFinance Theory of Change




As illustrated in the above image, ChildFinance asserts that financial education, when coupled with social education and access to appropriate financial services, will lead to empowered and socio-financially capable children which will in turn create a more economically and civically engaged future generation. Some of the potential distal impacts could include lowered poverty rates as well as greater economic well-being throughout a given community.

## Outcomes and indicators throughout the ecosystems approach

The academic group looked at the potential outcomes for the ChildFinance movement within an ecosystems approach. While the intervention is targeted at the child, the group felt that success must be measured looking not only at the child, but also at the individuals surrounding the child, at the country level and at the global level.

### The Child: In order to gauge the success of childfinance at the level of the individual, outcomes must be measured within financial education, social education and access.

Financial Education-
Outcome-Increase in financial literacy/knowledge
Indicator- Change in objective knowledge about financial topics, improved sense of control regarding personal financial future, ability to define/describe financial concepts, improved awareness about financial concepts
Outcome- Improvement in critical thinking abilities
Indicator- more thoughtful decisions, increased time horizon, transferable skills, better use of diverse information sources about finances
Outcome-Attitudinal improvement
Indicator- more responsible attitude towards personal financial well-being, greater awareness of the connection between economy and personal financial behaviors, feeling more connected to larger community

Social/Life Skills Education-
Outcome- Socialization
Indicator- Awareness of personal rights and responsibilites, recognition that those rights apply to others, increased ability to delay gratification
Outcome- Increased confidence, self-efficacy, and possible selves
Indicator- increase in entrepreneurship, articulate future personal goals, establishing interim steps towards personal goals
Outcome- Higher self esteem
Indicator- Ability to revise/refine goals to account for changes and setbacks
Outcome- Increase in social capital

Indicator- communal engagement, ability to work as part of a team, recognize strengths of others
Outcome- Increased educational aspirations
Indicator- Number of young people enrolled in school, amount of time spent in school

Inclusion/Access-
Outcome- Greater financial inclusion
Indicators- Amount of savings, level of satisfaction, number of youth making use of financial products

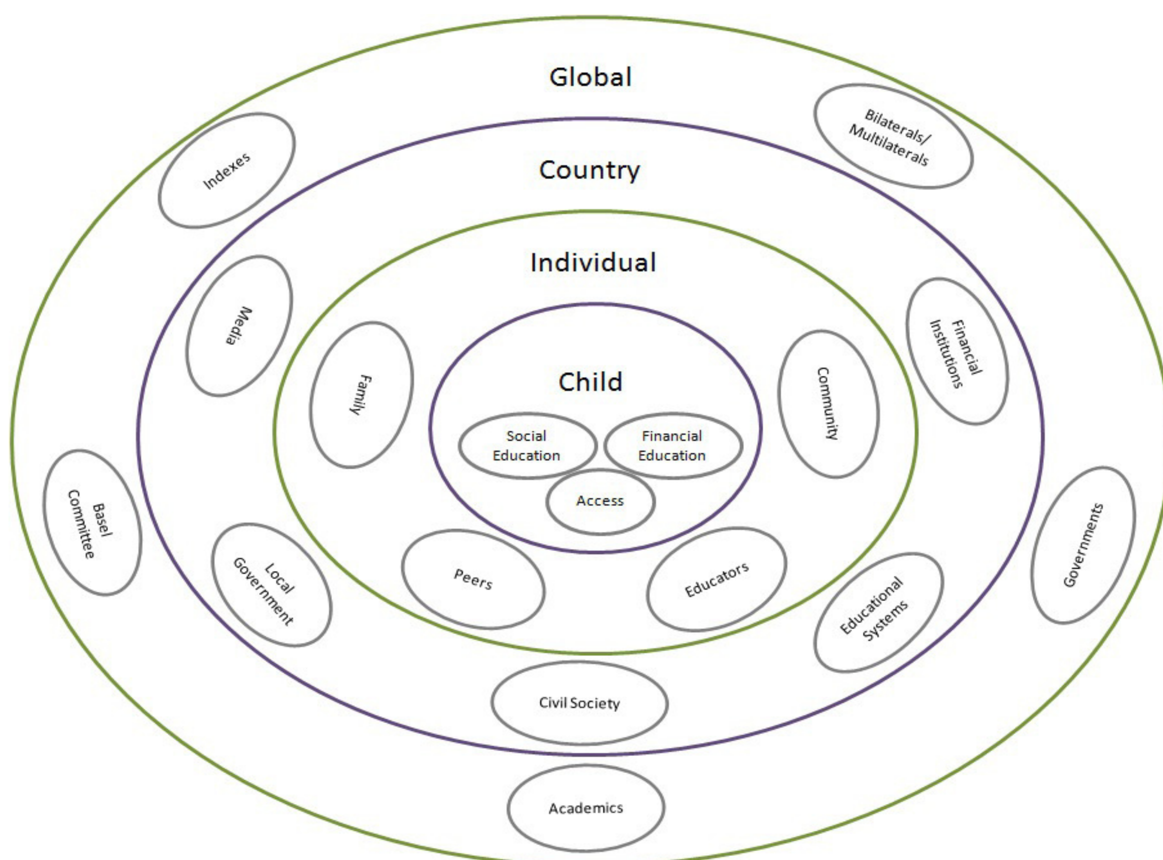
### The Individual: Gauging the change in those immediately surrounding the child would include his/her family, their peers, educators and community.

Outcome- Improved quality of life in the community
Indicator- Health indicators in the community (death, access to health services, number of health care providers in the community, etc), Improved safety within the community (fewer crimes committed, reduction in violent crimes), Improved economic outlook (number of people working, average income level, number of new industries

### The country: When looking at the country level, the group recommended that in order to gauge success, numerous things must be examined such as:

Media-
Outcome- Increased exposure of childfinance topics in the media
Indicators- Number of campaigns, blogs, downloads, etc
Local government-
Outcome- Increase in childfinance-friendly policies of government

## Child Finance Ecosystem




Indicators- number of endorsements, new laws and regulations, social service changes

Financial Institutions-

Outcome- Greater uptake in child-friendly banking

Indicators- involvement of central banks, policy change, level of competition for child clients, number of innovative new child-friendly products and services, measuring demand for child-friendly products and services, tracking of long term trends in private savings and debt, number of accounts

Educational Systems-

Outcome- Increase in educational systems teaching social and financial education in curricula

Indicators- Number of programs, change in policy to officially accommodate social and financial education, number of in-service training sessions for educators and pre-service curriculum training, number of teacher-workdays on financial education

Civil Society-

Outcome- Increase in civil society participation with childfinance topics

Indicators- number of people/organizations actively engaged in ChildFinance (partners, secretariat, community members, teachers, etc; within a country and aggregate)

Global: When looking at the global level the following things should be considered:

Indexes-

Outcome- Increase in childfinance topics used in global indexes of wellbeing

Indicator- Number of indexes using these

Bilaterals and Multilaterals-

Outcome- Increased involvement of organizations like Unicef or USAID in ChildFinance

Indicators- Funding levels, incorporation of ChildFinance into programs

Governments-

Outcome- Increased national government involvement

Indicators- funding levels, policies, laws

Basel Committee-

Outcome- Involvement of central banks

Indicator- Basel Committee adding the topic of ChildFiance to the agenda

Academics-

Outcome- Increase in research surrounding ChildFinance

Indicator- number of studies conducted

Potential Moderating variables that can affect the relationships within the ecosystem:

Socio-demographics, age, gender, race, ethnicity, culture,

disabilities, type of education (direct, indirect/ formal, informal)

## Gaps

The gaps in the research are numerous. There is insufficient research to make definite conclusions on the impact of financial education and inclusion on children and youth. Research is especially deficient in the impact of financial education on children and youth in developing countries and in developed countries other than the U.S. The lack of research is in the developing world is especially troubling as this is where the greatest impact could be had. There is also insufficient research on the many cross-cutting themes of ChildFinance, including age, gender, geography, and external economic socializing agents such as parents. Research in all of these areas is important for the academic and theoretical development of the ChildFinance movement.

The interplay between financial education and financial access also needs more research. Johnson and Sherraden (2007) have theorized that the barriers that are keeping children out of the financial systems might actually be negating any positives that could be had from financial education. They believe that children and youth cannot benefit from financial education unless they also have opportunities to put their knowledge to use. "Although teaching financial concepts to these children may increase their financial knowledge and build financial decision-making skills--i.e., increase financial literacy--these gains in human capital may do little to increase financial capabilities in the absence of access to mainstream financial institutions" (2007, p. 9).
Another category of research that is highly deficient yet important for the practice of ChildFinance related initiatives is market research. Establishing best practices are crucial for delivering the most effective and appropriate financial educational and inclusion programs. Such market research should identify the appropriate methods of delivering education (such as target age, materials, in or out of school, experiential or conceptual methods, mandate or optional program, etc) and also the most appropriate financial products and services for children. Further, market research should be used to develop a business case for financial product and service providers to convince them to provide the most appropriate financial products and services for children. A case might also be necessary to present to policy makers in circumstances where legal or institutional barriers prevent the financial inclusion of children and youth.

The current gaps in the research can be categorized as follows:

## Financial Education

- The impact of rights-based education combined with financial education
- The impact of financial education on different age groups
- The impact of financial education on different genders
- The impact of financial education on different geographic locations and cultures
- The difference of impact of financial education implemented in developed and developing countries
- The impact of financial education on families and communities in the long run (is there a multiplier effect?
- The impact of financial education in developed countries other than the United States
- Market Research on the impact of different methods of financial education, specifically, experiential financial education methods/what are the best practices?
- What are impacts of external economic socializing agents, such as parents, peers, and advertising on children and youth's financial education?
- What are the policy implications of the research which could be proposed today?

## Financial Inclusion

- The impact of financial inclusion on different age groups
- The impact of financial inclusion on different genders
- The impact of financial inclusion on different geographic locations and cultures
- The effectiveness of financial inclusion implemented in developed and developing countries
- The impact of financial inclusion on families and communities in the long run (is there a multiplier effect?)Market Research on the types of products and services that are appropriate and effective for children in different locations and ages
- Impact of financial inclusion policy reforms in different countries
- What are the risks of financial inclusion in different contexts?
- What are the challenges facing financial inclusion in different contexts?
- What is the business case for financial inclusion?
- What are the policy implications that could be proposed today?

## Education and Inclusion



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In order to substantiate the theory of change proposed by ChildFinance, there are an additional number of gaps in the research that must be addressed through different research projects.

- Determining the impact of an account when coupled with social/life skills and financial education. This should be done through a randomized control trial so that the effects can be compared with those that did not receive the education and those that received only one of the two aspects.
- Comparing the various approaches to determine different levels of impact.
- Determining the effects on asset accumulation (through a formal account but also looking at less formal accounts) of solely providing financial education and comparing it with a group that received both financial and social/life skills education.

## Conclusion

From this literature review, it appears that financial education and inclusion are potentially effective means of improving the wellbeing of children and youth. The outcomes of financial education and inclusion may be improved financial knowledge, attitudes, skills, and behavior which lead to better financial literacy. Thus, the impact of such efforts may potentially improve financial capability and overall wellbeing. However, these conclusions have not been proven unequivocally and thus, more research is needed on the effectiveness of financial education and inclusion. The gaps in the research can diminish and a greater case for financial education and inclusion can be attained if more research is conducted surrounding these topics. The case can then be used to advocate for policy change. In most countries, policy change is required to achieve full financial inclusion. Advocating for this change will be one of the most important activities for the ChildFinance movement.

In short, this paper identified the gaps in the research and impact indicators that can be used for further research in order to form a basis for the next steps of the ChildFinance movement. These next steps are to conduct research to fill these gaps and formulate an argument for financial education and inclusion of all children, everywhere. After this case is made, policy reform can be advised and the movement can focus on a campaign for financial education and inclusion for children and youth.

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## Appendix A

### Household Saving Rates as Per Cent of Disposable Household Income

| Net savings | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Australia | 5,094 | 5,982 | 7,235 | 6,055 | 7,135 | 6,605 | 4,134 | 3,15 | 2,037 | 3,503 | 0,554 | -0,52 | -0,44 | -0,23 | 1,323 | 1,516 | 1,61 | 4,273 | 2,809 | 3,015 |
| Austria | 11,82 | 12,1 | 12,06 | 11,83 | 9,301 | 7,731 | 8,483 | 9,802 | 9,162 | 8,044 | 7,996 | 9,122 | 9,315 | 9,674 | 10,79 | 11,34 | 12,02 | 11,03 | 9,601 | 9,67 |
| Belgium | 13,88 | 15,14 | 14,81 | 16,37 | 14,33 | 13,24 | 12,74 | 13,1 | 12,33 | 13,73 | 12,93 | 12,22 | 10,75 | 10,04 | 10,87 | 11,15 | 11,48 | 15,02 | 13,38 | 13,1 |
| Canada | 13,01 | 11,85 | 9,454 | 9,211 | 7,018 | 4,872 | 4,854 | 4,015 | 4,678 | 5,152 | 3,458 | 2,644 | 3,166 | 2,125 | 3,539 | 2,501 | 3,685 | 4,999 | 3,764 | 3,089 |
| Czech Republic | .. | 6,437 | 1,242 | 9,954 | 6,137 | 6,05 | 4,079 | 3,411 | 3,294 | 2,207 | 2,95 | 2,37 | 0,473 | 3,166 | 4,84 | 6,339 | 5,841 | 2,551 | 3,106 | 3,676 |
| Denmark | 0,577 | 1,336 | -2,68 | 0,159 | -0,23 | -2,79 | -1,23 | -5,57 | -3,97 | 2,07 | 2,126 | 2,386 | -1,35 | -4,23 | -2,32 | -3,17 | -2,43 | 3,157 | 4,944 | 3,458 |
| Finland | 9,306 | 7,254 | 1,386 | 4,136 | 0,678 | 2,534 | 0,621 | 2,366 | 0,478 | 0,344 | 0,461 | 1,437 | 2,732 | 0,881 | -1,1 | -0,9 | -0,29 | 2,643 | 1,732 | 1,055 |
| Germany | 12,68 | 12,06 | 11,38 | 10,99 | 10,55 | 10,11 | 10,08 | 9,457 | 9,215 | 9,424 | 9,93 | 10,28 | 10,41 | 10,51 | 10,55 | 10,75 | 11,24 | 11,29 | 11,98 | 11,42 |
| Hungary | .. | .. | .. | 14,38 | 15,56 | 14,19 | 13,46 | 9,869 | 8,912 | 8,47 | 6,423 | 4,334 | 6,837 | 6,076 | 7,48 | 4,63 | 2,977 | 3,744 | 5,255 | 7,63 |
| Ireland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4,073 | 3,822 | 7,02 | 5,232 | 3,674 | 1,657 | 3,972 | 9,269 | 10,01 | 8,643 |
| Italy | 20,24 | 19,52 | 18,14 | 17,01 | 17,89 | 15,12 | 11,36 | 10,24 | 8,419 | 10,48 | 11,25 | 10,26 | 10,2 | 9,851 | 9,109 | 8,192 | 8,614 | 8,378 | 7,678 | 7,487 |
| Japan | 14,66 | 14,22 | 13,35 | 12,63 | 10,49 | 10,28 | 11,35 | 10,05 | 8,652 | 5,071 | 4,97 | 3,892 | 3,558 | 3,869 | 3,77 | 2,41 | 2,29 | 2,328 | 2,431 | 3,179 |
| Korea | 24,43 | 23,09 | 21,76 | 18,5 | 18,06 | 16,06 | 23,19 | 16,13 | 9,257 | 5,227 | 0,391 | 5,247 | 9,172 | 7,17 | 5,191 | 2,905 | 2,907 | 3,568 | 3,481 | 3,781 |
| Netherlands | 16,09 | 14,14 | 13,93 | 13,97 | 12,4 | 12,99 | 11,97 | 8,868 | 6,711 | 9,479 | 8,434 | 7,486 | 7,316 | 6,274 | 6,031 | 8,119 | 6,809 | 9,979 | 9,225 | 8,563 |
| Norway | 5,349 | 6,363 | 5,447 | 4,839 | 2,579 | 3,016 | 5,706 | 4,691 | 4,29 | 3,072 | 8,199 | 8,945 | 7,232 | 10,07 | 0,104 | 1,46 | 3,327 | 7,278 | 5,052 | 5,129 |
| Poland | .. | .. | .. | 14,58 | 11,74 | 11,69 | 12,09 | 10,99 | 10,16 | 12,01 | 8,15 | 7,617 | 7,729 | 6,923 | 6,546 | 7,098 | 3,921 | 6,342 | 6,361 | 6,214 |
| Slovak Republic | .. | .. | .. | 5,437 | 8,398 | 8,785 | 7,538 | 6,772 | 6,711 | 4,132 | 3,783 | 1,432 | 0,299 | 1,402 | 1,077 | 3,173 | 2,325 | 4,471 | 6,722 | 6,744 |
| Sweden | 12,41 | 9,357 | 8,142 | 8,257 | 6,256 | 3,45 | 2,838 | 2,767 | 4,323 | 8,961 | 8,412 | 7,796 | 6,374 | 6,209 | 7,211 | 9,185 | 11,25 | 11,42 | 11,65 | 9,326 |
| Switzerland | 13,12 | 13,03 | 12,38 | 12,74 | 10,92 | 10,66 | 10,69 | 10,81 | 11,65 | 11,87 | 10,73 | 9,378 | 8,991 | 10,08 | 11,44 | 12,69 | 12,82 | 15,29 | 14,95 | 14,68 |
| United States | 7,348 | 5,797 | 5,22 | 5,246 | 4,881 | 4,616 | 5,254 | 3,054 | 2,909 | 2,68 | 3,523 | 3,459 | 3,417 | 1,378 | 2,369 | 1,72 | 2,651 | 4,256 | 3,41 | 3,552 |
| Gross savings | | | | | | | | | | | | | | | | | | | | |
| France | 14,72 | 15,47 | 14,83 | 15,89 | 15 | 15,94 | 15,48 | 15,21 | 15,01 | 15,73 | 16,83 | 15,72 | 15,83 | 15,01 | 14,99 | 15,54 | 15,34 | 16,34 | 15,64 | 15,17 |
| Portugal | .. | .. | .. | 13,15 | 11,88 | 10,81 | 10,46 | 9,811 | 10,23 | 10,93 | 10,57 | 10,55 | 9,729 | 9,239 | 8,087 | 6,141 | 6,407 | 8,755 | 6,9 | 6,409 |
| Spain | 13,18 | 15,55 | 13,15 | 17,5 | 17,39 | 15,99 | 14,41 | 12,67 | 11,14 | 11,08 | 11,36 | 11,98 | 11,28 | 11,32 | 11,15 | 10,65 | 12,91 | 18,76 | 17,48 | 16,96 |
| United Kingdom | 11,75 | 10,85 | 9,331 | 10,33 | 9,441 | 9,573 | 7,365 | 5,205 | 4,67 | 6,038 | 4,8 | 5,115 | 3,703 | 3,945 | 2,873 | 2,154 | 1,524 | 6,957 | 6,431 | 5,356 |

Note: The adoption of new national account systems SNA93 or ESA95 has been proceeding at an uneven pace among OECD member countries, both with respect to variables and the time period covered. As a consequence, there are breaks in many national series. See table "National Accounts Reporting Systems and Base-years" at the beginning of the Statistical Annex and OECD Economic Outlook Sources and Methods (http://www.oecd.org/eco/sources-and-methods). Countries differ in the way household disposable income is reported (in particular whether private pension benefits less pension contributions are included in disposable income or not), but the calculation of household saving is adjusted for this difference. Most countries report household saving on a net basis (i.e. excluding consumption of fixed capital by households and unincorporated businesses). In most countries household saving includes saving by non-profit institutions (in some cases referred to as personal saving). Other countries (Czech Republic, Finland, France and Japan) report saving of households only.
Source: OECD Economic Outlook 87 database. http://www.oecd.org/document/3/0,3343,en_2649_34573_2483901_1_1_1_1,00.html

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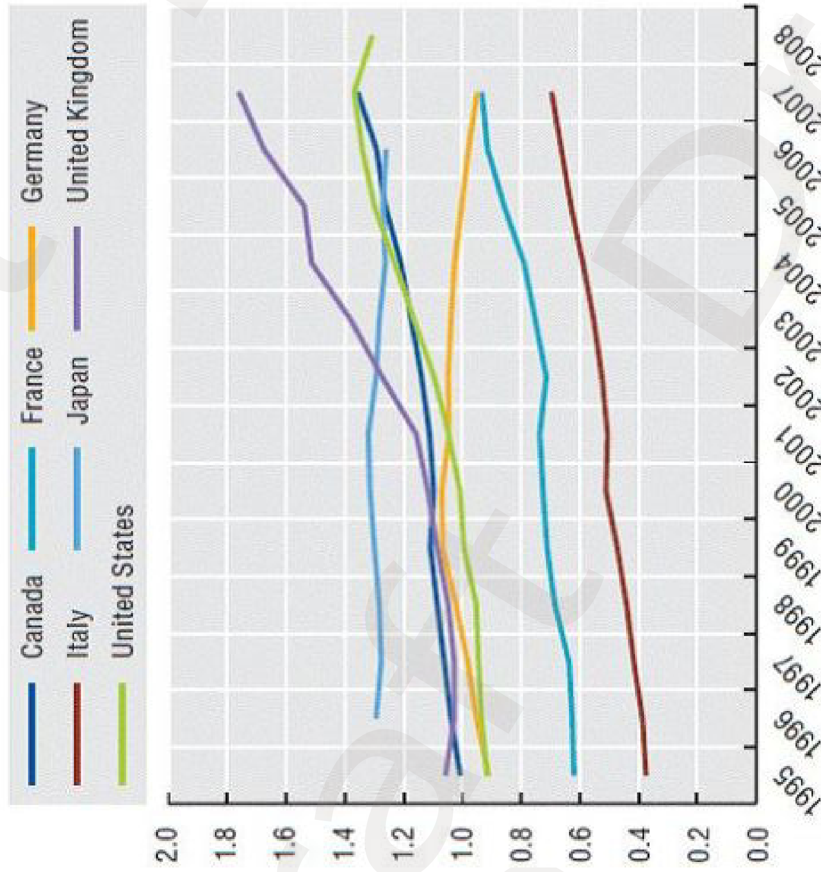
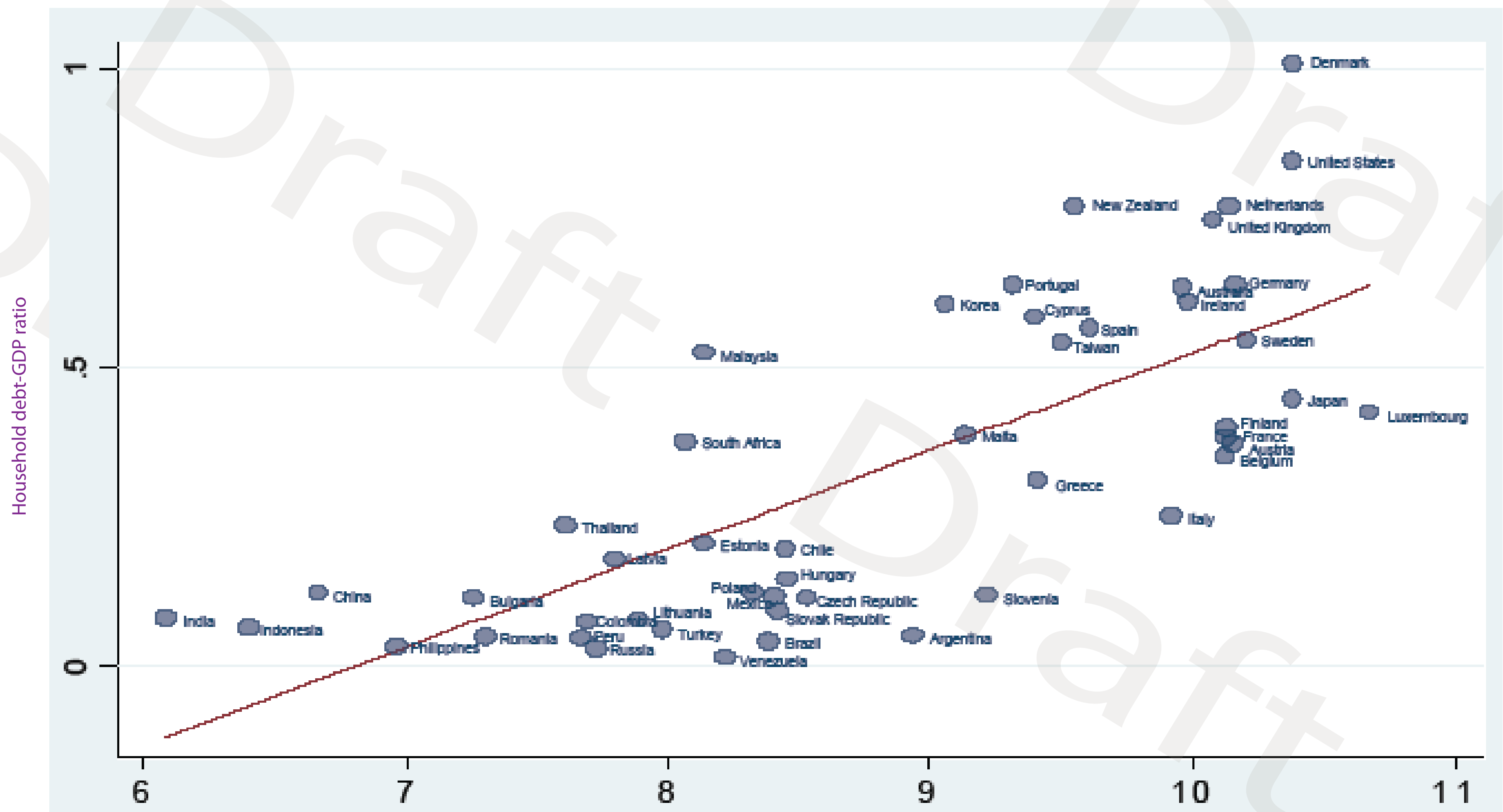


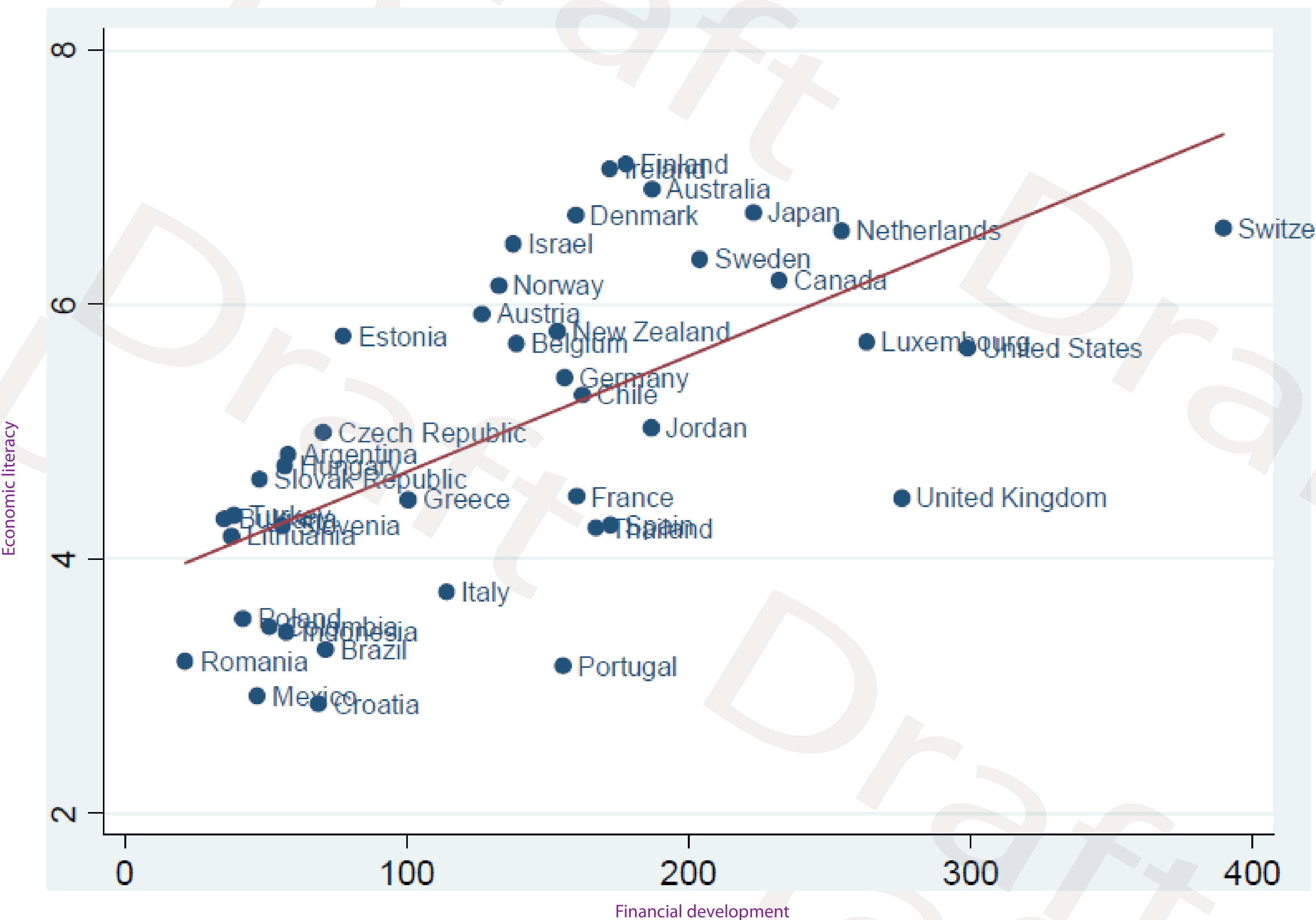
http://www.finfacts.ie/irishfinancenews/article_1019787.shtml

Large international variability in household debt-GDP ratio



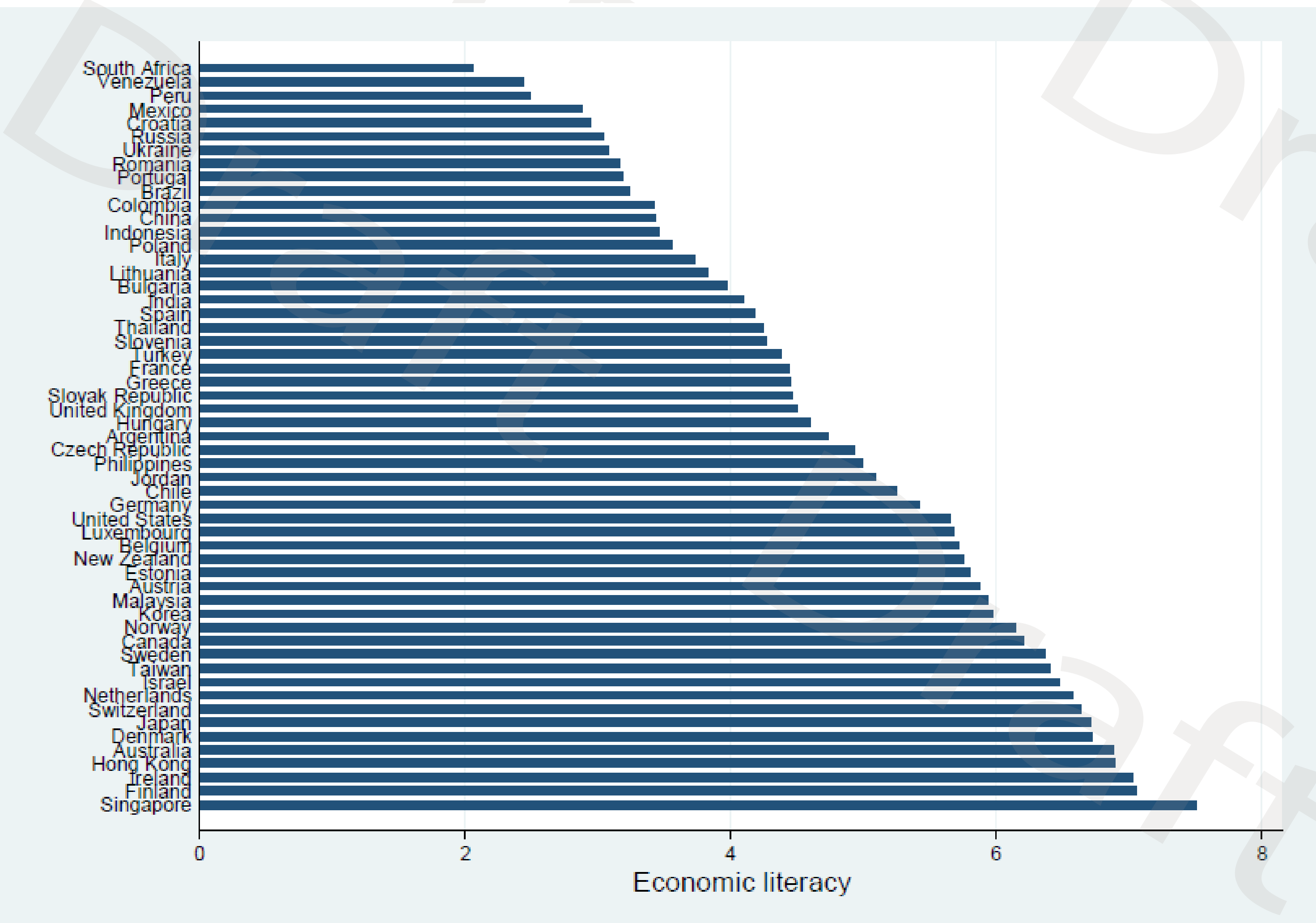

(Jappelli, Pagano, & Di Maggio, 2008)

Economic literacy and financial development



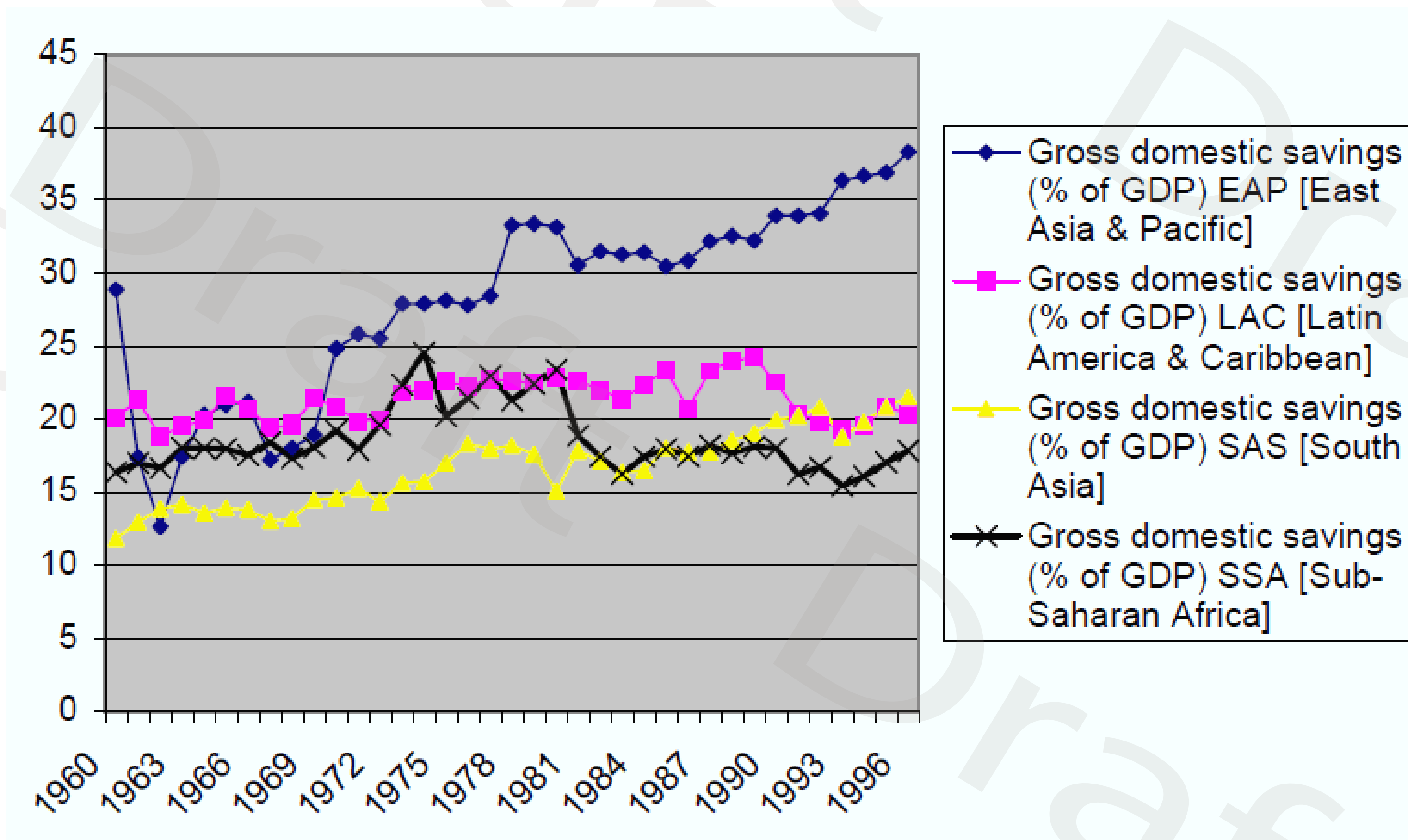

(Jappelli, 2009)

## Economic literacy around the world




(Jappelli, 2009)

Figure 1: Saving trends in Africa relative to other regions




(Aryeetey & Udry, 2000)

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## Appendix B

### Financial Education in Developed Countries

| Country | Program | Study | Intervention | Outcome | Indicators |
|---|---|---|---|---|---|
| U.S. | state adopted legislation | (Bernheim, Garrett, & Maki, 2001) | financial education mandate | financial literacy | self-reported rate of savings and net worth, adult financial decision making: adequacy of saving (also important - management of credit and prudent portfolio management) |
| U.S. | HSFPP/NEFE | (Danes, Huddleston-Casas, & Boyce, 1999) | high school financial planning curriculum | financial capability | financial knowledge, behavior, and self-efficacy: cost of credit, compare prices, track expenses, keep a budget, save, pay debts on time, write down goals for managing money, achieve these goals, discuss these goals, know questions to ask when shopping for auto insurance, know about investments, belief in ability to affect future with their money management, confidence in ability to make decisions dealing with money |
| U.S. | state adopted legislation | (Peng, Bartholomae, Fox, & Cravener, 2007) | school curriculum | financial literacy | investment knowledge and household savings rates |
| U.S. | multiple | (Holden, Kalish, Scheinholtz, Dietrich, & Novak, 2009) | financial education of pre-school children | financial capability | financial literacy - children's understanding of key concepts: time, numbers, money, income, markets and exchange, institutions, change |
| U.S. | multiple | (Klein & Mandell, 2009) | personal financial management high school curriculum | financial literacy | financial knowledge, attitude, and behavior test |
| U.S. | Credit Wise Cats/Students in Free Enterprise | (Borden, Lee, Serido, & Collins, 2008) | financial education seminar | attitudes, knowledge, and intentions toward financial responsibility | intended # of credit cards, type and amount of debt, knowledge test, money management, reading fine print, investments, method of spending on entertainment (cash or credit) |
| U.S. | NEFE | (Danes & Haberman, 2007) | NEFE High School Financial Planning Program | financial planning literacy | financial knowledge, self-efficacy, and behavior after studying a financial planning curriculum: budgets, comparing prices, and discussing money with family, knowledge on credit, auto insurance, and investments, achieving financial goals |

| | | | | | |
|---|---|---|---|---|---|
| U.S. | Real Money, Real World | (Sotak, Ferrari, Hudson, Cochran, & Bridgeman, 2008) | experiential education | financial literacy | financial knowledge (awareness (cost of living, how complicated money management can be, etc), importance (of management, education, etc), intentions (to do well in school, save, etc), and general change in beliefs) |
| U.S. | NEFE | (Danes & Haberman, 2005) | NEFE High School Financial Planning Program | financial planning literacy | financial knowledge, behavior, and confidence: compare prices; save; cost of credit, auto insurance, and investments; write down goals; to write goals for managing their money, to save money for their needs and wants, and to track their expenses; spending patterns; |
| U.S. | Northeastern law school | (Gross, Ingham, & Matasar, 2005) | seminar education, college students | financial planning literacy | financial literacy test |
| U.S. | FYF | (Walstad, Rebeck, & MacDonald, 2005) | DVD seminars | knowledge of personal finance | financial literacy test |
| U.S. | | (Mandell, 2009) | | financial literacy | questionnaire on behavior, attitudes, and knowledge |

(Aryeetey & Udry, 2000)



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# Appendix C

## Financial Education in Developing Countries

| Country | Program | Study | Intervention | Outcome | Indicators |
|---|---|---|---|---|---|
| India | community development programs | (Viswanathan, Sridharan, Gau, & Ritchie, 2009) | Marketplace literacy | consumer welfare | (for poor/vulnerable adults) skills, self-confidence, and awareness of rights, pool resources to buy wholesale process, standing up for consumer rights, bargaining, switching shops, taking over purchasing duties from husbands entrepreneurial literacy |
| South Africa | Siyakha Nentsha | (The Population Council, 2007) | financial literacy, HIV/ AIDS and reproductive health education | lifelong functional capabilities and well-being | economic literacy, skills, aspirations, social capital (networks and support), and HIV/AIDS and reproductive health knowledge, skills and preventive behaviors |
| Various | Aflatoun | (Aflatoun) | Child Social and Financial Education | social empowerment | Saving and Spending; Planning and Budgeting; Child Social and Financial Enterprise |
| Mali & Ecuador | AIM youth | (Freedom from Hunger) | youth-focused microfinance and financial education services | | not specified |
| Uganda and Tanzania | The Adolescent Development Programme (ADP) | (Rasul, Bandiera, Burgess, Goldstein, Gulesci, & Sulaiman, 2008 - 2010) | education and financial literacy training | Empowerment | "Effects on revenue from economic activity, control over earnings, school enrollment and progression, engagement in risky behaviors, early marriage, information sharing among young women, assistance provided among social networks and improvements in their ability to analyze and gain from potential economic and social opportunities. Researchers will also try to measure changes in girls' expectations and aspirations, as well as those of their parents" |

## Appendix D

### Financial Inclusion in Developed Countries

| Country | Program | Study | Intervention | Outcome | Indicators |
|---|---|---|---|---|---|
| U.K., U.S. | CTF, IFS | (Aspen Institute, 2007) | child savings accounts | empowerment and financial capability | rate of savings, family participation, where/when families open the account, awareness |
| U.S. | SEED OK | (Sherraden & Clancy, 2008) | child savings accounts (matched) | family and child well-being | savings for children; total savings in household; parents' attitudes and aspirations for children's education; parents behaviors regarding education, e.g., reading to young children; children's aspirations for education; children's early schooling performance; and children's knowledge, cognitive, and behavioral development |
| U.S. | SEED | (Scanlon & Adams, 2009) | education plus matched savings accounts | financial wellbeing | (1) fiscal prudence, (2) view of self, (3) future orientation, (4) sense of security, and (5) financial knowledge |

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## Appendix E

### Financial Inclusion in Developing Countries

| Country | Program | Study | Intervention | Outcome | Indicators |
|---|---|---|---|---|---|
| Kenya | TRY | (Erulkar & Chong, 2005) | Youth Savings Program | Economic wellbeing, empowerment | income, saving, assets, location of savings, attitudes on gender, reproductive health and behaviors |
| Uganda | SUUBI project | (Ssewamala, Han, & Neilands, 2009) | matched savings account | empowerment | self-esteem, health |
| India | The Population Council | (Mensch, Grant, Sebastian, Hewett, & Huntington, 2004) | savings accounts, vocational training, and reproductive health services | empowerment and social/economic well-being | social skills, self-esteem, reproductive health knowledge, behavior |
| India | SEWA | (Kalyanwala & Sebstad, 2006) | savings accounts | social and economic well-being | social behavior, savings goals, |
| Uganda | SEED/ SUUBI | (Ssewamala, Alicea, Bannon, & Ismayilova, 2008) | | Health/well-being | attitudes on health and behaviors |
| Uganda | SUUBI Project | (Curley, Ssewamala, & Han, 2009) | matched savings account | well-being, empowerment | confidence, future orientation, education/grades |
| | Padakhep | (Ahammed, 2009) | financial services | well-being, reduced vulnerability | financial products (income misuse, savings scope, self-employment, income, quality of life, livelihood security, family attachment) non-financial products/services (inc. edu) ( involvement with crime and violence, vulnerability to STI/ HIV/AIDS, personal hygiene status, attitude towards their life, capability of identification and solution of their problems with their own efforts, skill development through vocational training, access to education) |
| Kenya | Population Council | (Austrian, Ngurukie, & Sakwa, 2009) | financial education and savings programs | well-being, empowerment | savings behavior, transactional sex behavior |
| | BRAC | (Kashfi, 2009) | Financial Services with education | financial independence/ empowerment | Not specified |
| Rwanda | CRS OVC program | (Catholic Relief Services, Rwanda, 2009) | financial services | wellbeing | school drop-out rates, nutrition, ability to contribute to national health insurance plan, |
| Uganda | SEED/ SUUBI | (Ssewamala & Ismayilova, 2009) | matched-savings accounts | well-being, empowerment | asset theory, - savings and asset accumulation, attitudes towards savings, education and health behaviors, academic performance, sexual risk-taking behavior |
| Uganda | CSD | (Chowa & Ansong, 2010) | financial education and a savings account (matched) | economic well-being (savings and productive asset building) | productive assets, financial assets, net worth, covariance, total wealth, net wealth |

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