



UWL REPOSITORY

repository.uwl.ac.uk

The economy, society and financial education

Gamlath, Suresh (2011) The economy, society and financial education. *VISTAS: Education, Economy and Community*, 1 (1). pp. 26-35. ISSN 2047-7449

This is the Published Version of the final output.

UWL repository link: <https://repository.uwl.ac.uk/id/eprint/3136/>

Alternative formats: If you require this document in an alternative format, please contact: open.research@uwl.ac.uk

Copyright:

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy: If you believe that this document breaches copyright, please contact us at open.research@uwl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



The Economy, society and financial education

Suresh L. Gamlath | suresh.gamlath@uwl.ac.uk
School of Business, University of West London

Against the backdrop of the recent financial crisis that began in 2007, this paper explores the relationship between financial education and socio-economic stability. The ensuing discussion portrays consumer-education as having a substantial role to play in the security of the financial system; it also examines the complex nature of financial literacy and its implication for policy.

The conclusion presents a paradoxical relationship between economic stability and financial capability that highlights the challenges inherent in promoting it through education.

Keywords | *financial capability; financial regulation; financial crisis; social and economic wellbeing; philosophical anthropology.*

Introduction

Eight years after seeing in the new millennium, over a decade of economic stability came to an abrupt end in Britain. The first time that ordinary Britons suspected that something was amiss in the financial world was in September 2007, when Northern Rock (one of the top mortgage lenders) became the first British bank in over a century to suffer a run on its deposits. Around the same time across America and Europe, large banking establishments (including the Swiss bank UBS, and wall street giants Citigroup and Merrill Lynch) were announcing unprecedented losses.

As the true scale of the crisis began to dawn on governments, they mobilised rescue packages aimed at recapitalising large financial institutions – a bill that ran into the many billions of pounds. While state intervention prevented some banks from being liquidated, others like Bear Stearns and HBOS were acquired by their rivals. The knock-out blow to the banking world came on September 15, 2008 when Lehman Brothers (once a potent symbol of the Wall Street Empire) filed for Chapter 11 bankruptcy in the United States. The pitiable downfall of this paragon of banking sealed the fate of the rest of the industry.

As the instability that originated in the financial sector spread to the real economy, recession became the inevitable consequence for much of the developed world, adversely affecting growth in the global economy. At the time of writing, the emerging consensus on the cause of the crisis pointed to sub-prime mortgages and collateralised debt securities; blame was also apportioned at the Fed's relaxed monetary policy, and the failure of regulators to curtail casino-style gambling among financial traders.

However, an issue that is less well explored in the mainstream literature is the relevance of consumers' financial literacy to economic stability. The growing level of personal debt and its de-stabilising effect on the economy is a concern to many governments. Even before the recent crisis, people's ability to make prudent financial decisions and to plan their economic futures has attracted high-level discussion. In 2006 the G8 held an International Conference on Improving Financial Literacy in Moscow (November 29-30). The conference discussed the relationship between financial literacy and economic development; the role of financial education in enabling people to plan for retirement (pensions) and reduce the threats to their personal security (insurance); and the evaluation of several financial education programmes including recognition of best practice.

More recently in 2009, Finance Ministers from the G20 countries meeting in Pittsburgh, USA, pledged to:

'... launch a G-20 Financial Inclusion Experts Group. This group will identify lessons learned on innovative approaches to providing financial services to these groups, promote successful regulatory and policy approaches and elaborate standards on financial access, financial literacy, and consumer protection.' (United States. The Pittsburgh Summit 2009) Article 14.

The issue of financial illiteracy is not only of concern to the developed world, but has become a global agenda, involving emerging economies as well. In March 2010, the Organisation for Economic Cooperation and Development (OECD) and the Reserve Bank of India jointly hosted a conference to '*advance and elevate the policy dialogue on financial education and literacy*' internationally; particularly in the South East Asian region, (OECD, 2010).

In Britain, the Financial Services Authority's Base Line Survey revealed that many people failed to adequately plan ahead for retirement, and they were not sufficiently prepared for contingencies like loss of income, or emergency expenditure (Atkinson et al., 2006). According to the report, only a small proportion of the UK households were facing a severe debt crisis, but a larger number were vulnerable to slight changes in economic conditions. One significant contributor to this state of affairs is the lack of responsible financial planning on the part of households – many of whom are incurring unsustainable levels of personal debt. This pattern of behaviour is marked by a generation gap, with a majority of people below the age of forty, being less financially capable than those older. However, one cannot entirely blame the consumer for a lack of restraint in an economy that thrived on credit-led spending made possible by an advanced financial economy. In developed economies, sophisticated financial systems have been successful at diversifying away the risk of holding personal debt. It is therefore not surprising that in a well insured economic environment people were generally ignorant of finance, Ferguson (2009).

Our modern financial system emerged from Big Bang Day on October 27, 1986 that changed the way business was done at the London Stock Exchange. With the transfer from the open-outcry method to electronic screen-based trading the rules effectively removed the distinction between stock brokering and stock jobbing. Until then, stock brokers bought and sold financial securities through stock jobbers on behalf of clients (i.e. investors); while stock jobbers dealt exclusively with brokers and other jobbers, making their profit on the bid-ask spread. After the reforms, brokers traded freely with other brokers without having to go through a jobber, and the use of faster electronic communication systems gave markets added liquidity and greater avenues for lowering risk (Michie, 1999, p. 543-94).

The regulatory controls that once existed to ensure 'gentlemanly' conduct were replaced by an ethos of self-regulation. Investment banks were left unfettered to invent new financial instruments to diversify away the risk of holding assets (and liabilities). With the blurring of the distinction between investment banking (which engaged more directly with asset trading on the exchange) and retail banking (which served the general public), financial alchemy that was once confined to elitist circles came to influence the lives of ordinary citizens.

The resulting complexity of financial services contributed to a classic case of information asymmetry in the market for consumer finance. For free-market systems to function efficiently, consumers must possess the ability to make choices that maximise their private benefit. The complexity of the modern financial economy has made understanding it, a more difficult task for the average person. We can therefore argue that the potential for market failure due to information asymmetry tends to be high, unless two broad interventions are made: first, to provide better information about financial products, and; second, to improve the ability of the consumer to make prudent financial choices.

Economics, sociology, and pedagogy of financial education

The theory of free markets operates on the premise that by exercising their private interests, buyers and sellers contribute to the efficient allocation of societal resources, as if by an invisible hand (Adam Smith, 1776, book IV, ch.II, p.456). Societies that are driven by free-market fundamentals, allocate economic resources based on the private interests of buyers and sellers. It therefore implies that the rational consumer who acts to maximise his/her private benefit would work in harmony with other rational consumers to discipline the producers into providing what consumers want. However, while the high street shopper's eye for a bargain can serve to increase competition among retailers; financial services are far more complex and therefore not readily discernible to the average consumer.

The resulting information asymmetry (Stigler, 1961) would cause providers of financial services to have an unfair advantage over their consumers, thus creating an imbalance of 'bargaining' power. If the problem is widespread and persistent it will compromise the market's allocative efficiency. Hence, for the financial services market to function efficiently, consumers must have an adequate understanding of personal finance. It is this issue that financial literacy seeks to address.

In principle, a financially literate person would be able to make effective decisions to promote his/her economic wellbeing, and would have the knowledge and understanding to make rational financial choices. According to the US Financial Literacy and Education Commission:

'Financial literacy can be described as the ability to make informed judgments and to take effective actions regarding the current and future use and management of money. It includes the ability to understand financial choices, plan for the future, spend wisely, and manage the challenges associated with life events such as a job loss, saving for retirement, or paying for a child's education.'
(United States. Government Accountability Office (GAO), 2009) p.2

It therefore seems plausible that the systemic lack of financial literacy in society would lead to inefficiencies in the market for consumer finance.

As a deregulated financial industry, freed from the shackles of caution and restraint sought to maximize its profits, it deployed an arsenal of creative ingenuity to diversify-away the risk associated with investing and lending, through instruments collectively known as derivatives. As retail and investment banking combined their operations, it linked the consumer more directly to the financial markets. In the recent financial crisis, the weakness of the banking sector was attributed to its exposure to derivatives known as collateralised-debt obligations, which were backed by US sub-prime mortgage agreements. These instruments allowed mortgage loans to be repackaged as tradeable securities, and sold on the international financial exchanges. A mortgage may be regarded as both an asset and a liability: to the borrower the loan constitutes a liability; while to the issuer it would be an asset that yields a regular interest income, and a claim on real estate. As these mortgage-backed securities were sold onto third parties – the end beneficiary was no longer the original issuer, but the party that owned the financial instrument backed by these mortgage agreements. So long as the borrower was able to maintain scheduled payments there ought not to be any concern; however, a small but significant proportion of these derivatives were backed by sub-prime mortgages.

In the US sub-prime mortgage market, lenders made loans to people who due to their low income or patchy credit history did not qualify for a normal mortgage loan. Sub-prime borrowers were therefore more likely to default on their loans, and in many cases their homes did not offer substantial collateral. Furthermore, sub-prime borrowers paid a much higher rate of interest than ordinary borrowers, thus increasing the burden of keeping up with debt-repayments and adding to the risk of default. Through collateralised debt instruments this personal risk was transmitted to the rest of the economy through the financial system – afflicting not only the American economy but also the global economy. Setting aside contributing factors such as the unscrupulous practices of sub-prime lenders (Grose, 2009), the bubbling real-estate market (Coleman et al., 2008), and government policy that encouraged home-ownership; a financially literate consumer would have realised that what was being offered was too good to be true, and that in the long run he/she would be worse-off.

When viewed from an educational perspective, the whole incident may be attributed to people's lack of financial literacy (Gamlath, 2008).

It is therefore fitting that regulatory efforts to strengthen the financial system should also address financial literacy and personal financial education as a significant part of legislation. The Financial Services Bill that had its first reading in the House of Commons in November 2009 provides for the establishment of a Consumer Financial Education Body (CFEB) whose function it will be:

... to enhance ...

(a) the understanding and knowledge of members of the public [of] financial matters (including the UK financial system); and

(b) the ability of members of the public to manage their own financial affairs.

Financial Services Bill (2010), s.8 / c.6A (FSA 2000). See also Great Britain (2010) for the Financial Services Act.

However, underlying the obvious nature of financial literacy are some subtle realities which have implications for efforts to revitalise it within society; one of these is its relation to social status, (SEDI, 2004, Atkinson et al., 2006). The lack of financial literacy impacts unevenly on different demographic and socio-economic groups – for e.g. people from more affluent backgrounds would suffer less from it than those of the 'working-class'; an older person with a family, is likely to be more adept at managing personal finances than a single young adult. Moreover, financial literacy is dependent on the level of education. Mandell (2008, p. 29) noted that:

'College students are far more financially literate than high school students, and literacy increases with each year of college.'

Also, economic status tends to be co-related to other factors such as race, ethnicity, age, gender and family status (for instance single-parent families). Therefore, improving financial literacy, may involve focussing on: poorly educated people from particular ethnic or racial groups; young people mainly from low-income families; single parent families struggling to make ends meet, and so on. Targeting these vulnerable social groups who are less immune to economic shocks would yield a greater marginal benefit to society – but it would also mean recognising that personal financial education has an inherent social bias. In the recent crisis, sub-prime lending was common place in the poor neighbourhoods of the US, and was largely confined to low-income

households which had little or no access to mainstream sources of finance, (Engel and McCoy, 2007, Immergluck, 2009). Perhaps a more equitable concept would be financial capability as applied by Johnson and Sherraden (2007).

The notion of capability refers to the freedom of choice a person has in life (Sen, 1993); it refers to real opportunities that people have when deciding what course of action to take in managing their economic wellbeing, (Nussbaum, 2002). The key difference between literacy and capability is that the latter takes account of external conditions in addition to the person's internal capability. Without access to mainstream finance a person would not have these real opportunities and therefore teaching him/her to make informed choices (i.e. financial education) would be practically redundant. Dixon (2007) suggested that delivering greater financial education to the consumer should also need to involve the Department for Education and Skills, as well as the Department for Work and Pensions, which are well placed to provide education to vulnerable groups in society. Inclusion of such groups is a critical factor to the success of any national scheme, because even if a person were to possess the knowledge and understanding to make the rational choices; it would be useless if he/she is shunned by the local bank and the only recourse to funds is the '*local loan-shark*' (Ford and Rowlingson, 1996, Regan and Paxton, 2003). Without access to mainstream financial services, financial literacy would be of little or no use to low-income households (Kempson et al., 2005); hence, regulation should address this issue as exigently as placing greater controls on bankers' bonuses.

Effective regulation should therefore seek to create (greater) access to mainstream financial services for lower-income households. In Britain, the body charged with advising the government on creating greater access to mainstream financial services for lower-income households is the Financial Inclusion Taskforce (see Great Britain. HM Treasury, 2010). Its job is to monitor and evaluate the government's 'financial inclusion goals' published alongside the 2004 Pre-Budget Report, and to offer independent advice to the Treasury in this regard. However, greater access to financial services alone solves only part of the problem; without the right education the consumer would be no better off. Greater freedom has to be combined with increasing the consumer's competency to make rational choices and informed decisions.

(Atkinson et al., 2006)'s definition of financial capability includes a person's attitudes and behavioural patterns in five key areas: making ends meet; keeping track of personal finances; planning ahead; choosing financial products, and; staying informed about financial matters. Unlike studies in the US that measure financial literacy in terms of financial cognition; surveys in the UK have included people's actual behaviour and attitudes towards managing their own finances. Financial capability therefore, is not merely about knowing; it also involves doing. This implies that the financially capable person does more than recite basic concepts by memory; a financially capable person must think and behave rationally. However, this tends to be easier said than done.

Some readers may have at some point been motivated (for example by a health seminar) to eat responsibly and to exercise more regularly; but if they are like the majority of people, they would have in a few months deviated from their original (strict) regime. For most people, it takes quite a lot of personal discipline and willpower to achieve a healthy lifestyle: whether it involves slimming down, quitting cigarettes, or sorting out one's finances. Appreciating the virtues of personal money management; having the financial vocabulary to understand and communicate effectively; or knowledge of various financial services, in and of itself would not be sufficient. Instead, financial capability may be regarded as a form of social instinct, which is acquired through the process of socialisation; but unlike cognitive knowledge, it defines a person's behaviours, attitudes and how he/she reacts in certain situations. Hence, teaching personal finance from an early age might prove highly effective, (Bernheim et al., 2001, Davis et al., 2008).

Traditionally, children learned basic life-skills (like personal finance) from their parents at home; while the school concentrated on literacy and cognitive development through formal subjects like maths, science, history etc. Given the complexity of the financial world, not all households would be able to provide their off-spring with the necessary financial skills to survive in the real world. Also, given its association to socio-economic class (discussed earlier) there exists a case for schools to provide more financial education in the classroom.

In Britain, schools have been teaching economic wellbeing and financial literacy as part of the citizenship curriculum since 2002; however, it is not mandatory and forms part of a repertoire of other elements included in the citizenship curriculum. A study commissioned by the Ifs School of Finance (Davis et al., 2008), supports the view that providing dedicated lessons in personal finance would be a more effective approach to improving financial capability than infusing it with other subjects. This view was shared by a group of more than eighty MPs who signed a motion in June 2007 calling on the government to introduce stand-alone GCSEs and A-Levels in personal finance (Ford, 2007). However, there are pragmatic obstacles that have to be overcome if mandatory lessons in personal finance are to become a common reality in UK schools – chief among them is the already crowded curriculum, and teachers' own understanding of personal finance. Besides increasing the educational provision, there is also the issue of effective pedagogy: would formal education be able to deliver a meaningful learning experience that develops a person's financial instinct?

The education system is generally oriented towards developing literacy; but financial capability calls for it to condition people's behaviour. Most money management courses base their curriculum on the life-cycle hypothesis, which assumes that people are able and willing to plan their current consumption and savings to provide for significant changes in future circumstances such as owning a home, starting a family, going into retirement, etc., (Modigliani and Brumberg, 1954). In reality, however, most (if not all) personal financial decisions carry a significant emotional bias; far from basing their decisions on methodical planning (mechanical reasoning), people are more likely to use intuition – which behavioural psychology calls heuristic simplification.

(Kahneman and Tversky, 1979)'s Prospect Theory, suggests that people's decisions are not based on probabilities of the future but on 'decision weights' which are attached to potential gains or losses. (Kahneman and Tversky, 1984) note some peculiar facts about people's reactions to gains and losses: for e.g. a £2000 gain would make a person happier than gaining £1000; but not twice as happy. Furthermore, a person's negative reaction to loss is greater than the positive reaction to gain. That means, for a typical person in his/her thirties saving to provide for retirement, the relative satisfaction gained from building up a nest egg may appear to

be less than the opportunity cost of forgoing current consumption. (Thaler and Benartzi, 2004) noted that money management seminars given to employees to encourage them to save for the future were not effective at encouraging conducive behaviour. Instead they suggested that a more effective means of encouraging saving behaviour would be to alter company pension schemes such that they link increases in contributions to increases in pay – eliminating the need for individuals to make financial decisions.

When making financial decisions people do not always go for the cheaper option, they do not use textbook cost-benefit-analysis; instead their choices are influenced by emotional bias. (Prelec and Loewenstein, 1998) found that people planning to purchase an electrical appliance (e.g. a washing machine) would prefer a payment plan that begins after purchase; but when the same option is offered to pay for a holiday, people preferred to pay for it before going on that holiday – even though both payment options were identical. Their research illustrated the use of mental accounting in personal financial decisions. Financial management courses teach people to keep track of their incomes and expenditures (accounting), and to plan for the future, anticipating likely changes in circumstance (budgeting). However, when recording their financial transactions people use a mental accounting system in which each decision is compartmentalised and isolated from others – such that one decision is being made with relative disregard to other decisions, actions and outcomes. For example, let's take the classic case of a couple saving towards their mortgage deposit on their first home. They already have £12,000 in the bank and are working up to £25,000. The pair has created a mental account in which the £12,000 in the bank is emotionally attached to their future home. Meanwhile, if they were to consider purchasing a car worth £7,000 they would rather finance it through a separate loan, willing to pay twice the interest they are earning on their cash savings; even though using their cash savings would have been the cheaper option. For our couple, the rational option would be more painful, because they have already created a *house* mental account which is kept separate from the *car* mental account – although mixing the two would have been financially cheaper. Therefore in practice, a person's decision whether to borrow to finance a large expenditure is not based on objective budgeting, but on mental budgeting.

People would be willing to get into debt in order to finance a durable good such as a TV or a car as these would be consumed over a longer period; whereas paying for a vacation after they have consumed it would be perceived as a burdensome debt. Therefore, people's borrowing habits are not merely determined by how much debt they are getting into or the interest they pay on it; but whether it actually *feels* like a debt. Such biases tend to make our everyday financial behaviours to deviate from what is expected by traditional theories of economic behaviour. When courses in money management are developed, it is to the traditional theories that they often subscribe – possibly falling short of their true potential. This begs the question: how do we make financial education more effective such that it delivers the essential capabilities that people need to make effective decisions in real life? Part of the answer is to re-examine how we teach personal finance.

Given that personal financial education should seek to improve people's capacity to make sensible judgements in real situations, one pedagogic approach worth noting is experiential learning. Here, learners acquire the requisite knowledge and skills by experiencing the phenomena they are attempting to understand. 'Meaningful experience' enables us to build conscious connections as we attach a sensory value to each experience (Dewey, 1916). Learning through experience results in change within us; it leads to changes in behaviour and attitudes, and improves our judgement. (Kolb, 1984) presented a four-stage iterative model of the experiential learning process: it begins when the learner actively interacts with "concrete experience" of a real situation and reflects on this experience. The learner then conceptualises the experience, and formulates a working hypothesis about the phenomenon, which is then tested through application to the real situation. This process occurs in a continuous cycle until it reaches a natural climax; or is terminated. In formal education, teachers have used simulations of real situations to give their students the opportunity to learn from experience, but in the safety of their classroom, (Faria, 2001).

(Mandell, 2008) may have found empirical evidence that confirms the effectiveness of experiential learning in finance. When comparing financial literacy of school leavers, he observed a noticeable difference among children who had taken identical money management programmes in school. Children whose programme included a simulated stock market game demonstrated greater financial literacy than those who took the same programme but without the simulation. In a typical stock market simulation, students were given a hypothetical sum of money (usually \$100,000) and tasked with making investment decisions on financial assets traded on the stock exchange under realistic market conditions. The object of the game was to maximise returns over a given period; it gave students a meaningful experience of the relationship between risk-and-return, as they learned to make financial judgements through a process of action and feedback. (Dewey, 1916) noted that in such learning environments students became part of the phenomenon they were attempting to learn, and are not merely spectators of theory; instead they acquire the potential for reflection and deep thought, enabling them to apply the principles they had learnt to new and different situations later on in life.

For financial education to make a real difference in people's lives, it should begin early in life and continue beyond school and into adulthood, (Preston and Feinstein, 2004). This is because experiential learning does not stop after school, in fact it increases. The meaningful experience that formed the basis for learning during the early years has changed – it has now become the person's life itself. In early education the emphasis should be on developing cognition; however in the later stages the emphasis should shift to "behavioural conditioning" (Shirer and Tobe, 2005). Thus, equipping people with the skills required to survive in financial life may require a shift from education to training (McCrea, 1920). These are early days and therefore it is hard to fully determine the scope and effectiveness of the latest plans to improve the nation's financial capability; but what is certain is that to tangibly improve financial capability it needs to be driven by the right philosophy and purpose, else it risks being little more than a public information service.

Conclusion

The discussion above has highlighted the subtle yet inextricable link between financial education and economic stability. In addition to weaknesses in the banking system, the recent crisis has underscored the strategic significance of financial capability. For markets to function efficiently it is important to ensure the symmetry of information between sellers and buyers; however, the complexity of the financial system places the consumer at a natural disadvantage. To redress this imbalance two forms of interventions are necessary: on the one hand to ensure that suppliers of financial services provide greater information about their products, and; at the same time to improve the consumer's ability to make prudent financial choices.

Beyond its direct relevance to the stability of free-market economic systems, financial capability has a strong association with social justice. Providing effective financial education to the masses should be part of a broader public policy aimed at greater social inclusion. Acquiring the skills to survive in a complex and dynamic financial world is an experiential process that is co-dependent on the environment. Therefore, teaching methods that actively build on experience and interaction have been promoted as highly effective means of building capability.

Paradoxically, despite our best efforts at educating the consumer's financial sensibilities; the greatest teacher may turn out to be the economy itself. In a relatively stable economy with a large social-welfare state and a well insured consumer, financial capability (as discussed above) would seem irrelevant to people's economic wellbeing, and therefore the net social benefit of greater financial education, would be low. The net social benefit of financial capability seems to be dependent on the state of the economy and its impact on our expectations of the future. Hence, the onset of recession and the return to *boom and bust* might prove to be an effective educational tool – teaching people the fundamentals of scarcity and choice; changing their attitude towards credit; and making them more receptive to the importance of prudent financial management.

References

- Atkinson, A., McKay, S., Kempson, E. and Collard, S. (2006) *Levels of financial capability in the UK: results of a baseline survey*. [online]. Bristol: University of Bristol Personal Finance Research Centre.
Available from: <<http://www.bristol.ac.uk/geography/research/pfrc/themes/fincap/pfrc0602.pdf>>
- Bernheim, B., Garrett, D. and Maki, D. (2001) Education and saving: the longterm effects of high school financial curriculum mandates. *Journal of Public Economics*, 80, p. 436–66.
- Coleman, M. D., LaCour-Little, M. and Vandell, K. D. (2008) *Subprime lending and the housing bubble: tail wags dog?* [online], Social Science Research Network.
Available from: <<http://ssrn.com/abstract=1262365>>
- Davis, P., Ralph, S., Farnsworth, V., Shi, X., Black, L., Kambalouka, A. and Farrell, P. (2008) *The influence of financial literacy education on students' personal financial management and aspirations*. Manchester: University of Manchester.
- Dewey, J. (1916) *Democracy and education: an introduction to the philosophy of education*. New York: Macmillan, p. 163-78.
- Dixon, M. (2006) *Rethinking financial capability: lessons from economic psychology and behavioural finance*. London: IPPR.
- Engel, K. C. and McCoy, P. A. (2007) *From credit denial to predatory lending: the challenge of sustaining minority homeownership*. [online]. Social Science Research Network, working paper series.
Available from: <<http://ssrn.com/abstract=1011489>>
- Faria, A. J. (2001) The changing nature of business simulation gaming research: a brief history. *Simulation and Gaming*, 32, p. 97-110.
- Ford, J. and Rowlingson, K. (1996) Low-income households and credit: exclusion, preference and inclusion. *Environment and Planning*, 1, p. 1345-60.
- Ford, L. (2007) Government urged to provide student finance lessons. *The Guardian*. London.
- Gamlath, S. L. (2008) *An educational construct of the first great financial crisis of the Third Millennium*. [online]. Social Science Research Network, working paper series.
Available from: <<http://ssrn.com/abstract=1287691>>
- Great Britain. (2010) *Financial Services Act 2010*. [online]. Great Britain: National Archives/HM Government.
Available from: <<http://www.legislation.gov.uk/ukpga/2010/28/contents>>
- Great Britain. HM Treasury, (2010) *Financial Inclusion Taskforce*. [online]. Great Britain: National Archives/UK Government.
Available at: <http://www.hm-treasury.gov.uk/fit_index.htm>
- Great Britain. House of Lords, (2010) *Financial Services Bill*. Great Britain: House of Lords.
- Grose, C. (2009) *Of victims, villains and fairy godmothers: regnant tales of predatory lending*. [online]. Clinical Research Institute at New York Law School, Research paper series, paper no. 08/09#20.
Available from: <<http://ssrn.com/abstract=1412784>>
- Immergluck, D. (2009) *Neighborhoods in the wake of the debacle: intrametropolitan patterns of foreclosed properties*. [online]. Social Science Research Network, working paper series.
Available from: <<http://ssrn.com/abstract=1533786>>
- Johnson, E. and Sherraden, M. S. (2007) From financial literacy to financial capability among youth. *Journal of Sociology and Social Welfare*, XXXIV, p. 119-46.
- Kahneman, D. and Tversky, A. (1979) Prospect theory: an analysis of decision under risk. *Econometrica*, 47, p. 263-91.
- Kahneman, D. and Tversky, A. (1984) Choices, values and frames. *American Psychologist*, 39, p. 341-50.

- Kempson, E., McKay, S. and Collard, S. (2005) *Incentives to save: encouraging saving among low-income households*. Bristol: University of Bristol, Personal Finance Research Centre.
- Kolb, D. A. (1984) *Experiential learning*. Englewood Cliffs, NJ.: Prentice Hall.
- Mandell, L. (2008) *The Financial Literacy of Young American Adults: Results of the 2008 National Jump\$tart Coalition Survey of High School Seniors and College Students, The Jump\$tart Coalition for Personal Financial Literacy*.
- McCrea, N. G. (1920) Training versus education. *The Classical Journal*, 15, p. 482-93.
- Michie, R. C. (1999) *The London Stock Exchange: a history*. Oxford: Oxford University Press.
- Modigliani, F. and Brumberg, R. H. (1954) Utility analysis and the consumption function: an interpretation of cross-section data. In *Post-Keynesian economics*, ed. K.K. Kurihara. New Brunswick, NJ.: Rutgers University Press.
- Nussbaum, M. (2002) Capabilities and human rights. In Grieff, P. D. and Cronin, C. (Eds.) *Global justice and transnational politics: essays on the moral and political challenges of globalisation*, eds. P.D. Grieff and C. Cronin. Cambridge, MA.: MIT Press.
- OECD (2010) *RBI-OECD Workshop delivering financial literacy challenges, approaches and instruments*. Bangalore, India, OECD: Directorate for Financial and Enterprise Affairs.
- Prelec, D. and Loewenstein, G. (1998) The red and the black: mental accounting of savings and debt. *Marketing Science*, 17, p. 4-28.
- Preston, J. and Feinstein, L. (2004) *Adult education and attitude change: wider benefits of learning research*. London: Centre for Research on the Wider Benefits of Learning.
- Regan, S. and Paxton, W. (2003) *Beyond bank accounts: full financial inclusion*. London: IPPR.
- SEDI (2004) *Discussion paper: financial capability and poverty*. Ottawa: Policy Research Initiative.
- Sen, A. (1993) Capability and well-being. In *The quality of life*, eds. A. Sen and M. Nussbaum. Oxford: Clarendon Press.
- Shirer, K. and Tobe, E. (2005) *Getting ready to save: applying stages of change theory to financial education for families with low incomes*. Michigan: Michigan State University.
- Smith, A., (1776) *The wealth of nations, book IV Ch. II*, p.456. [online]. London: Adam Smith Institute.
Available from: <<http://www.adamsmith.org/adam-smith-quotes>>
- Stigler, G. J. (1961) The economics of information. *Journal of Political Economy*, 69, p. 213-25.
- Thaler, R. H. and Benartzi, S. (2004) Save more tomorrow: using behavioral economics to increase employee savings. *Journal of Political Economy*, 112, p.164-87.
- United States. Government Accountability Office (GAO), (2009) *Financial Literacy and Education Commission: progress made in fostering partnerships*. [online]. GAO-09-638T. Washington DC.: GAO.
Available from: <<http://www.gao.gov/new.items/d09638t.pdf>>
- United States. The Pittsburgh Summit (2009). *Leaders' statement: The Pittsburgh Summit*. [online]. United States: U.S. Department of State.
Available from: <<http://www.pittsburghsummit.gov/mediacenter/129639.htm>>

