What should we teach our children about money?

1. Purpose

This article is about doing more to help young people understand money, how our economic system works, how they can contribute positively within it, and how they can thrive within it.

In the UK today, only a little is taught in this area despite recent improvements and there is still great scope for improvement. Teaching more of the right information would be good for the young people and for society as a whole. Our economy should work better as more people know how to act well within it.

The greatest influence would be if schools across the UK taught this material.

However, it could also be done by parents wanting to help their children, by tutors engaged by parents, or by students themselves using self-study materials, perhaps including games specifically designed to develop some of the central ideas.

Interest in *financial* education is growing across many countries. Kaiser et al (2022) showed that the number of journal articles that mention financial literacy in their title in the Web of Science per year has been increasing roughly exponentially since around 2000, when there were almost none. Kaiser et al provide a meta-analysis of 76 randomized experiments that shows both the exciting progress internationally and one of the major problems. That problem is that the scope of thinking about financial education is typically limited to personal decisions taken from a selfish point of view rather than looking more widely at the economic system and how to be a good citizen within it.

In contrast, interest in *economic* education has continued for decades, but at a low level and largely focused on the economist's perspective, which is that of a government or business. Typically, this education is an option for students but there have been some examples of all children receiving courses in economics and a recent one is in a region of Germany (studied by Kaiser and Oberrauch, 2021). While such courses tend to increase interest in economics they sometimes fail to have any practical impact, especially with less academically able students.

In this article I argue for an approach that is broader than typical financial education but less academic and more personal than typical economic education, and directed more at common misconceptions. I also suggest how to tackle the political angle. A recurring theme is the importance of promoting long-term, cooperative economic relationships.

2. Teaching in the UK today

Some teaching in UK schools already relates to money.

For many years, mathematics teaching has included skills such as how to work out which of two or more price deals is the best and how to do calculations involving interest. However, students are taught little of the fundamental logic of decisions or how to make good decisions generally. Even the A level material on 'decision' mathematics (e.g. Pearson, 2021) does not explain that comparing alternative courses of action by considering differences between their consequences is the fundamental logic of most conscious decisions.

From 2014 the UK's National Curriculum has included coverage of finance (Department for Education, 2014) but it is just two small mentions among many, many other topics. For England, financial education is under Citizenship. For stage 3 there is a bullet that reads:

- 'the functions and uses of money, the importance and practice of budgeting, and managing risk.'

For stage 4 there is a bullet that reads:

- 'income and expenditure, credit and debt, insurance, savings and pensions, financial products and services, and how public money is raised and spent.'

Sadly, this did not cause a huge improvement in financial education in the UK. A survey conducted in 2016 and again in 2019 (Hopkins and Farr, 2019) asked children if they recalled being taught about how to manage their money. Roughly 40% at primary and secondary level did but, of those, 59% said this was in maths lessons. Only 22% of those who could recall receiving financial education at school recalled it in PSHE and just 14% recalled it in Citizenship. In other words, about 6% of children could recall being given financial education in Citizenship, where the National Curriculum puts it. There was no trend of improvement from 2016 to 2019, so no reason to be optimistic at that time.

The National Curriculum does not have to be followed by private schools and academies (GOV.UK, n.d.) in England, and about 80% of state funded secondary schools in England are academies (GOV.UK, 2022).

Since the surveys mentioned above, more work has been done to promote financial education in UK schools.

Another relevant source of guidance concerns PSHE (Personal, social, health and economic education), where the economic element is not a statutory requirement but is still expected of schools. A programme of study for PSHE education covering key stages 1 to 5 has been developed by the PSHE Association, which is the national body for PSHE education (PSHE Association, 2020).

This programme includes some useful points about work and money.

In 2021, the Money and Pensions Service published teaching materials for primary and secondary schools. A lot of this material was really promoting developments by other groups (though perhaps funded by the Money and Pensions Service).

In particular, what amounts to a more detailed curriculum for primary and secondary schools has been developed by Young Enterprise (Young Money, 2020a and 2020b). A plan is offered for ages 3 to 19 with content under the following headings:

- **How to manage money:** progressing from recognizing coins and notes to financial planning, paying, saving, and borrowing.
- **Becoming a critical consumer:** progressing from knowing that money can be used to buy different things up to decisions about financial products (e.g. bank accounts and pensions).
- **Managing risks and emotions associated with money:** progressing from keeping cash in a safe place to being aware of changing patterns of financial fraud and buying insurance.
- **Understanding the important role money plays in our lives:** progressing from naming ways to use money up to career planning.

A textbook called *Your money matters* has been developed for students aged 14 – 16, with some supporting material for teachers (Young Money, 2021).

Financial education materials are also offered by several banks and charities.

Overall, these are excellent and valuable contributions and more may have been done by the time you read these words. However, there is still considerable scope for improvement.

3. Opportunities for improvement

The materials developed following the introduction of financial education to the National Curriculum, if implemented by all schools, would be hugely beneficial to students and society.

However, teaching young people still more about money and the economy can lead to improvements in the following areas:

- Personal decisions and positive contributions to society and our economy.
- Vulnerability to political agitation and willingness to behave in ways that weaken our economy.
- Vulnerability to fraud.

3.1 Better personal decisions by good citizens

These go far beyond choosing the best price between two similar products in a shop or choosing a pension from alternatives.

3.1.1 Decision analysis

It would help many people to understand the underlying elements of decisions and have simple rules of thumb that help them tackle all important decisions better.

3.1.2 Economic facts of adult life

Beyond that, young people can benefit from a better understanding of work, life, and aging. They need to make choices that will influence their future career options. They need to understand how their abilities will change over time along with their ability to do work for others that sustains our lives.

3.1.3 Being a good economic citizen

Beyond that, a better understanding of how to do their fair share of the work needed to sustain our society and make the economy work efficiently would benefit young people and society as whole.

Our economy is an invention created by people. Surely it helps if participants know how it is supposed to work and how they are supposed to act within it.

One example of this is **shopping around**. Carefully considering alternatives when buying is not just good for the individual directly. It also encourages good suppliers and products. If, instead, too many people just buy the most obvious brand without research or thinking then some companies will avoid pressure to innovate and improve while other companies that are improving will grow less slowly. Consequently, shopping around is good for the economy as a whole, good for others, and indirectly good for the individual shopper.

Knowing all this, the individual shopper may be a little more motivated to do their fair share of the shopping around.

Shopping around is facilitated by **informative sales messaging**, which is usually preferred by buyers and effective if your offer is objectively good. Providing evidence that helps the buyer (e.g. a customer or potential employer), or helping them find such evidence, is crucial to reducing uncertainty and making wise buying decisions. Again, this is good for the seller individually and for the buyer and economic system as a whole.

Another example is **informed investment of savings**. Of course the investor wants good returns and low risk but also investors perform an important service to society. They should direct money (i.e. support) to companies with good prospects of providing valuable services efficiently and away from less worthy ventures. Ideally, investors will perform fundamental analysis of companies, markets, technologies, and social trends to evaluate investments. Failing that they should have their money directed by others who do that analysis. If too many investors just react to prices (e.g. track indices) or try to guess future price changes from past prices, without doing the fundamental analysis, then prices can become unrealistic. Money is not directed effectively and market prices become unstable, with the possibility of sudden reversals and losses.

Two related examples are **developing your skills** and **developing the skills of others**. At work a person can develop their own skills through training, coaching, and self-study. Formal education provides opportunities to develop study skills that can be applied to self-study. It is only necessary to think of knowledge that would help, find a source of it, and make the effort. This is beneficial to the individual, who gains an advantage, and to others who benefit from the learner’s increased abilities. Taking the trouble to coach others, perhaps sharing technical tips with them, is beneficial to the coach because it makes their team more effective and allows more delegation. It is also beneficial to the economy more widely because people become more capable.

Another important example is **choosing useful career roles**. Individuals benefit from choosing roles that are useful to others, especially those that support our basic needs (e.g. food, sanitation, shelter, transport, healthcare, education). Demand in those sectors tends to be a little more reliable in the long run. Choosing careers in these areas is good for the individual but also good for society.

In contrast, choosing a career in a sector that people can do without or that harms people and might be regulated out of existence is risky for the individual and bad for society.

A 'career' today rarely involves joining an organization in one's youth and then staying there, with some promotions perhaps, until retirement 45 years later. Many of us have suffered redundancy, sometimes more than once, and have had to switch to significantly different roles often. This makes it all the more important to focus on finding roles and skills that help others.

At present, the PSHE programme, the financial education framework, and the book (*Your money matters*) focus mainly on personal finance and have little coverage of how our economy works or a person's role within it. The assumption is that people will get jobs to get money to buy the things they need and want. There is no more to it. The point of view is, in this sense, self-centred.

The simple point that we should do jobs that are useful to other people is not mentioned. When listing factors that might drive choice of career, the need for that job to be done is not mentioned. This is a strange omission when so much of the rest of the PSHE programme is concerned with encouraging prosocial behaviour. Why not mention the social value in the activity that most people spend the longest part of their waking lives doing?

There are some striking differences between the numbers of people in the UK working in different roles. The data come from slightly different years and some methodologies may be a little different but there are roughly 708,000 people working in the cultural sector (in 2021 according to Department for Digital, Culture, Media & Sport, 2022), 674,000 in gardening (according to The Horticultural Trades Association), 527,000 in sport (Department for Digital, Culture, Media & Sport, 2022, again), 400,000 in the weddings industry (UK Weddings Taskforce), 360,000 working as nurses in the NHS (Nuffield Trust, 2022), and just 5,500 installing solar panels (Statista, 2022).

The fact that these people are employed is not strong evidence that the jobs need to be done or that this allocation of people to roles is ideal for our society. Some demand is wasteful (e.g. for extravagant weddings) and it would help our economy if there was a lack of services to meet that demand. It would put up the price of the wasteful behaviour. Some demand is harmful (e.g. for tobacco). Some demand is reduced by lack of skilled people to meet it, as with solar panels now.

To some extent, the educational and career choices people make shape the demand they later face. For example, if there are many excellent barbers in a town then its citizens probably will get slightly more haircuts than they would have, maybe even trying the hot towel shave too. If there are no competent solar panel installers for miles around, the waiting times are long, and the prices are high then many people will be put off even getting a quote, few of their neighbours will have solar panels, and demand will be lower as a result.

Nevertheless, this is not the ideal allocation of people to roles.

It is helpful for society if young people choose education and jobs wisely.

For the individual, a poor career choice could mean that an investment of time and money in learning does not lead to employment. Trying to get into an over-supplied role (usually a glamorous one) may lead to failure, perhaps after a period of low-income work.

Another important example of being a good economic citizen is **efficient use of real resources**. Individuals gain from finding low-cost ways to live a long and pleasant life. For example, there is no sense in paying to go powerboat racing at weekends if you enjoy walking in a local wood just as much. (Walking is also better for your spine and the environment.) Keeping money costs down usually involves being efficient with real resources (e.g. labour, energy, wood). This is good for society too because if one person does not consume those resources then they are available to others.

Extremely wealthy individuals have often achieved their wealth by **taking good care of assets that benefit others**. The assets are usually companies, land, or buildings. The individual gets control of the assets, improves them, and builds their long-term value. The individual may obtain income from the assets and use some of it to acquire more assets, which they also improve and care for using the same skill and diligence. Society benefits because those assets are well cared for by someone with proven ability and willingness. Being wealthy in this sense means control of, and responsibility for, assets. It does not necessarily mean massive personal spending on wasteful luxury consumption.

One last example of being a good economic citizen is perhaps the most important: **being cooperative**. Individuals gain by cooperating for mutual advantage with others, and that is good for others too. Individuals also gain from developing lasting economic relationships with others. Buyers and suppliers enjoy the ease of repeat business and the chance to adapt to each other for greater efficiency. This happens when both sides are fair, considerate, and, occasionally, a little flexible and forgiving.

Even where purchases are infrequent and repeat business is not a major consideration, developing a reputation for being cooperative and fair is helpful. Suppliers gain sales with minimal effort. The modern use of internet reviews has increased the importance of reputation because now it is so visible and clearly presented. This again helps our economic system work efficiently.

In contrast, a person who unfairly exploits the ignorance, trust, or desperation of others must continually find new victims and work hard to escape a growing bad reputation. Opportunities to cooperate for mutual gain will be few. The impact of such uncooperative, unfair, untrustworthy individuals for the economy as a whole is to create extra costs as other participants take more precautions.

Some people do not understand enough of our economy to participate properly and instead grumble about ‘the system’. Mistakes a person might make if they do not understand the basics of being a good economic citizen include these:

- Making self-indulgent career decisions without thinking about what others need (e.g. following their dreams to be entertainers, choosing not to work, choosing a university degree that does not contribute to employability).
- Then struggling to get a job, not making career progress, or lacking money and angrily blaming it on the

perceived meanness of others, 'the system', or 'capitalism'.

- Feeling a sense of failure, disappointment, or frustration because of having a job that is not glamorous or highly paid, or because others are paid more, even when the job is valuable to others and pays enough for a comfortable life.
- Living a lifestyle too expensive for their income and income potential. Making thoughtless, expensive purchases based on brand popularity. Failing to build savings and, instead, getting into expensive and unnecessary debt.
- Losing what money they have through day-trading or purchasing crypto-tokens.

The implications for society when people do these things include:

- Education and labour wasted on low value roles.
- Real resources wasted by thoughtless lifestyle choices.
- Markets undermined by failure to shop and invest intelligently after relevant research, leading to market failures and slower innovation and improvement.

Why doesn't our economic system prevent these behaviours? Incentives created by economic systems are crucial to how they operate. The UK's economic system already has many helpful incentives built in (e.g. through prices, taxes, reputation mechanisms, and rule enforcement). However, the power of the incentives is weakened if some participants:

- do not notice the incentives (e.g. do not notice that a price has changed or that some prices are lower than others);
- do not know how to respond to the incentive, perhaps not understanding the relevant mechanisms of the economic system;
- are motivated only by the direct, personal effects of their actions and not the indirect effects of their actions on others and the economy as a whole;
- think that responding to the incentive is in some way wrong and so refuse on principle to do so; or
- deliberately undermine the incentives by controlling prices or other factors because they think the economic system should work in a different way.

This is at least possible in some cases. Consider the following:

- Many children are insulated from economic realities by their loving parents. The parents wish their children to be happy and, to this end, give them what they want and do not burden them with knowledge of the efforts the parents made to provide what was wanted.
- Some jobs (e.g. politician, barrister, journalist, TV presenter) output only words and the rewards are often related to popularity and arguing skills rather than to people helped in practical ways. People in those influential jobs are insulated from economic realities to some extent. Their children, doubly so.
- Public sector jobs are usually insulated from market forces (e.g. a central government department is a form of monopoly) and some also do not have strong systems of performance measurement with appropriate incentives. Here again, workers may be less responsive to incentives to be useful efficiently or less willing to share economic decision-making.

- Young people are often encouraged to follow their dreams (often into an over-supplied entertainment sector) or do what they are good at (typically a sport, hobby, or something they have been doing at school).

3.2 Less vulnerability to unhelpful political rhetoric

Discussions of economic issues on social media provide ample evidence of extreme and unhelpful misconceptions about economics. These appear in the presentations by experts (e.g. videos, podcasts) and comments by the audience. The same claims appear in mainstream news media.

One effect of much of this rhetoric is to make people feel angrier and more resentful about the economic system and people in it than is truly justified. Examples of this include:

- Anger at the unemployed, imagined to be mainly spongers who collect benefits while selling cannabis and playing computer games.
- Anger at the government because ‘taxation is theft’.
- Anger at all billionaires for ‘hoarding’ wealth and getting rich at the expense of ordinary people.
- Anger at political ‘elites’ for spending too much time on identity politics and sustainability and not enough time on the economy.

A survey conducted in 2022 in the UK (Clemens and Globerman, 2023) found that 18- to 24-year-olds endorsed a wider variety of economic systems than older respondents. More thought that ‘Communism’ was the ideal economic system, but also more thought that ‘Fascism’ was the ideal economic system, and the same for ‘Socialism’, and even for ‘Capitalism’ (though here by a very small amount). In contrast, more of the older respondents disagreed that these economic systems were ideal. Lack of knowledge may be driving the young people who more strongly endorsed one of the systems.

3.2.1 Left-wing rhetoric

Overall, more young people are vulnerable to left wing rhetoric than to right wing rhetoric. Positive views of socialism and communism are surprisingly common in the UK among young people in particular (Niemietz, 2021), though the survey results suggested that many respondents were ignorant of economics and easily led by the questionnaire.

Too many young people are vulnerable to rhetoric that says freely made bargains are exploitation, money itself is bad, people who know about money are evil, people who have more money than average are evil and oppressive, and financial institutions are a confidence trick to enrich a greedy elite. Many readily accept claims that companies only act to make profits and that profit is evil. Some companies are like that but it's an unfair and misleading generalization.

Rhetoric designed to gain political support for people who promise to fight against rich elites has been used for thousands of years. It goes back to periods where exploitation by rich elites was far more severe than it is today in advanced democracies.

The King James Version of the Bible, in Timothy 6:10, claims that 'the love of money is the root of all evil'[1]. This well-known and often-quoted claim is plainly false since there are several other reasons

[1] Other translations are possible and do not always mention money.

why people do evil things. To make matters worse, if is often misquoted as 'money is the root of all evil'.

The Bible also has a somewhat negative view of lenders and for a long time Christians were forbidden from lending money with interest charged.

Finally, Jesus seems to have regarded all wealthy people as evil. His reasoning seems to have been that if they were not evil then they would have given their money away. The various ways of doing good with money that go beyond just giving it away are not considered.

Karl Marx is another source of these arguments. His writing expresses deep hatred of money, money transactions, people who have money or own productive assets, and profits.

Since his time, advanced societies have changed dramatically, reducing most of the problems Marx resented. Today, the UK is much more meritocratic, markets are managed carefully to prevent most exploitation, and there is a welfare state to take care of those who are struggling. Many ordinary people are 'capitalists' through their ownership of shares in major companies, directly or via their pension funds.

Thanks to improved technology, material inequality has almost certainly reduced even when wealth inequalities have increased. In past centuries, obesity was a sign of wealth and status. Today in the UK obesity is more common among poor people than among rich (Baker, 2022). Most people have centrally heated homes that make them more comfortable in winter than the nobility in Victorian times.

If more young people understood how modern economies are managed to minimize various problems then they would be less vulnerable to rhetoric designed to make them resentful. They would also be more effective participants in the economy.

3.2.2 Right-wing rhetoric

The opposite of the left-wing agitation discussed above is sometimes to embrace the harshest interpretations of our current economic system as good and desirable.

Many people know the movie line 'Greed … is good. Greed is right. Greed works.' spoken by the character Gordon Gekko in the movie *Wall Street*. The same speech references evolution, talking about people being 'eliminated' and decrying a corporate America which seemed to operate the principle of 'survival of the unfittest.'

Darwinian analogies are typical in this view. People might also endorse some or all the following ideas, which are wrong and dangerous for everyone:

- At work, we should do things purely for money for ourselves, with no concern for the people we provide products to, or others.
- If we can afford to do something because we have plenty of money and it is not, strictly speaking, illegal then it's perfectly acceptable to do it, no matter how wasteful, polluting, or otherwise harmful (e.g. complex tax avoidance, selling cigarettes, having six cars for one's exclusive use).
- The sole job of the Board of a company is to get money to the shareholders.
- If protecting dividends for shareholders requires making large numbers of people redundant at short notice then it is right to do so. There is no need to try to anticipate problems and make changes more gradually so that hardship is reduced.
- It is perfectly acceptable to take advantage of a person's temporary

desperation to get them to agree to something they would never have agreed to otherwise and that most people see as unfair and exploitative.

- If someone lets us trick them then it's their fault. There are always more suckers to work on.
- Government intervention in markets is always bad, even when it is to prevent abuses.
- People who are unsuccessful in the world of work, for any reason, should be left destitute to motivate everyone to try harder. It's Darwinian. If some literally die then that is not a big problem.

This behaviour creates costs for everyone in taking more rigorous precautions against exploitation and when too many people act on this basis, markets will cease to work properly, cooperative relationships will break down, and everyone will suffer.

The truth is that being useful to others is crucial to success in our modern economy, along with a long-term view. Shareholders are just one of the stakeholder groups of companies and all the stakeholder groups must be fairly treated to maintain long-term cooperation. Government intervention is helpful when it enforces the rule of law, prevents trickery, and blocks monopolies and cartels. Finally, people being destitute is inherently a bad thing and if failure results in being destitute then that is a reason for people not cooperating in the system at all.

Whether you see the justification for this less harsh approach as morality or as enlightened self-interest, the conclusion is the same.

3.2.3 Countering this rhetoric

The left-wing rhetoric says our economy is harshly competitive and that is bad. The right-wing rhetoric says our economy is harshly competitive and that is good. Both exaggerate the extent of harsh competition and, conversely, underestimate the degree of ongoing cooperation in relationships where money is used.

To counter this rhetoric, teaching should explain that most relationships where money is used are based on ongoing cooperation, desired by all participants. Further, in the cases where ongoing cooperation does not occur it would usually be better for the participants if it did.

3.3 Less vulnerability to fraud

Tricking people out of their money is an age-old crime. The existing UK teaching materials have quite good coverage of fraud and identity theft. However, there is no specific mention of today's most prominent area for fraud of interest to young people: crypto tokens.

Too many young people are vulnerable to these wealth scams. They need to understand that money for nothing is usually a scam and that talk of democratizing money is often disguising fraud.

Wealth scams, especially crypto scams, are dangerous today because they are common and sophisticated. There are thousands of scammers and probably millions of people who own some crypto tokens and want to talk up their value rather than lose heavily themselves. Online there are hundreds of thousands of people trying to maintain the hype and fight against information that reveals the fundamental problems with crypto schemes.

4. Truth and controversy

Teaching children more about money could become political indoctrination or get mired in political controversy.

To avoid this it is vital to:

- teach only what is true and not misleading;
- inform (not indoctrinate);
- avoid negative bias; and
- avoid loaded language.

The approach should be to teach facts that protect young people from misinformation. This is analogous to teaching the biology of immunity and vaccination to protect people from misinformation about vaccination.

It would be a mistake to set out the left-wing and right-wing rhetoric as if these were world views, something like religions. How economies work is not just a matter of faith or opinion, though there is much that nobody yet knows. We can focus on what is clearly true and useful to know.

4.1 True and not misleading

What is taught should be true. The truth of material must be assessed by considering evidence and logic, not by considering the level of controversy. Those who seek to exploit vulnerabilities have developed arguments to cast a vague sense of doubt over even what is undeniably true. They will certainly use them to try to discredit the idea of teaching about money (unless their material is taught as fact).

The claims made in education must be carefully controlled to ensure they are as strong as can be justified but no stronger. What is taught must debunk misinformation and promote good behaviours but without ignoring or excusing imperfect systems and behaviour.

It is often possible to talk about the behaviours that produce the best results without claiming that everyone today uses those behaviours consistently. For example, there are good and bad ways to get rich and to use wealth if you have it. Not everyone does these desirable things today.

4.2 Information not indoctrination

Teaching only what is true and not misleading does not prevent teaching from encouraging good economic citizenship. There is no need to introduce content unsupported by understandable mechanisms, such as lists of values or rights (with no specific, practical justification).

Teaching and assessment should aim to improve understanding of the consequences of a person's actions and ensure that students know good courses of action. However, they should not insist that students agree that the courses of action are good or that the economy is perfectly designed. Students should just be required to show they have the knowledge.

Inevitably, some students will try to make contrary arguments instead of explaining what they have been asked to learn. Most of these contrary arguments will be flawed and so students doing this will usually get lower marks in examinations as a result. They may feel this is unfair, discriminatory, blinkered, or personal persecution for not accepting society's 'ideology'. However, if the teaching is done as suggested in this paper then these lower marks will be reasonable.

Provided what is taught is correct, most students will readily agree with it and adopt the courses of action that make most sense. This includes doing their fair share of the work, including the economic decision-making needed to make our economy function well.

4.3 Avoiding negative bias

It is almost certain that negatively biased perceptions of the UK's economy and economic system are more common than positively biased perceptions. Evidence for this includes the following.

- Surveys of public perceptions of life in many countries and on many specific topics have generally shown a strong negative bias. These have been publicised by Gapminder (for perceptions of global poverty, population trends, life expectancy, etc), Norberg (covering a variety of topics in his book, *Progress*, 2017), and Pinker (also covering many topics, in his book, *Enlightenment Now*, 2018). These authors show how, on issue after issue, popular perceptions are of decline while in reality there has been strong improvement (often driven by technological improvements).
- Typically, messages about our economy from news media and campaigners focus on real or imaginary problems. Political opposition parties are typically extremely negative about the economy. However, even the government spends a lot of time talking about problems with the economy because it wants to explain what it is doing to solve them.
- We tend to react strongly to instances of bad economic behaviour (e.g. rogue traders, phoney discounts, imitation goods, huge bonuses for the bosses of failing businesses) while taking for granted our many routine purchases from trusted suppliers.
- We notice dodgy offers (e.g. online or by a market stall holder in town) but don't usually take them. Instead we buy from people we trust. So, even though we see dodgy offers quite often, they do not form such a large fraction of the economy.

Teaching about money should not be unrealistically positive to counter the negative bias but it should not replicate this negative bias and it should point out the existence of a negative bias.

It would be wrong to claim that our economic system is perfect or that everyone in it plays their role diligently and honestly. Conversely, it would be wrong to devote most teaching time to problems with existing systems, creating the false impression that what we have today in the UK is hopelessly flawed.

4.4 Avoiding loaded language

Teaching materials must carefully avoid language with misleading connotations. This means avoiding some surprisingly familiar phrases.

4.4.1 Divisive terms

Terms like 'the rich', 'the poor', and 'the working class' are subtly divisive because they suggest distinct groups of homogeneous people. In reality, wealth and income are distributed according to unimodal distributions and there is no obvious place to draw a line between those who are rich and those who are not. Also, there are wide variations within each group, almost wherever you draw the line.

Almost all the terms commonly used to talk about people with relatively low income or wealth are loaded and divisive in some way.

The terms 'deprived' and 'under-privileged' frame having a low income or wealth relative to others as something that is done to people by other, evil people.

Other possible explanations are excluded by these phrases, even though in some individual cases they might be true.

'Disadvantaged' ignores the possibility that a person with low wealth is simply very young and will go on to have a lucrative career or is old and has given their millions to their children.

The term 'poor' leaves a subtle ambiguity. Is it their financial position that is 'poor' or are they poorly performing people with a poor attitude?

The problems of other, less polite alternatives do not need to be explained. Terms to avoid include spongers, the underclass, chavs, and layabouts.

It is better to specify groups accurately and neutrally. For example:

- 'People in the bottom decile by individual income.'
- 'Households in the top 1% by net worth.'
- 'People in the top 10% by individual real resource consumption.'
- 'People in the top 5% by the Personal Financial Strength Index (a composite of several measures).'

Talking about career 'success' and 'failure' misrepresents the reality of our career journeys. We usually go through a process of repeatedly discovering or creating useful roles for ourselves (paid or unpaid). This is a process that should guide us to suitable roles. The aim is not for everyone to try to become billionaires but for everyone to find roles that are good for them and others. In this we almost always experience degrees of success, not complete success or failure.

For example, getting a place to study mathematics at Cambridge University is a great opportunity only for a tiny, tiny percentage of young people; for everyone else it would be a waking nightmare.

Often, if a person is not selected for a job then that is the right outcome, not a failure. Failure would be if the job decision was mistaken (e.g. because a candidate said something misleading in an interview or a recruiter was influenced by something irrelevant).

It is more accurate and less upsetting to talk in terms of 'role discovery' and 'finding appropriate roles' than to talk about career 'success' and 'failure'.

The terms 'capitalism' and 'socialism' are divisive terms primarily used by left-leaning people. Using them to discuss the UK's economy today is likely to lead to (1) bias and (2) confusion. It is better to refer to our current economic system as 'our current economic system' or call it a 'social market economy' (which is one of the accepted technical terms for what we now have).

The *bias* arises because of the framing effect of the terms 'socialism' and 'capitalism'.

The term 'capitalism' was introduced around 1850 as a pejorative term that blamed all the economic ills of the time on private owners of companies. Relevant authors are Louis Blanc in 1850 and Pierre-Joseph Proudhon in 1861. The word 'capitalism' appeared in the Oxford English Dictionary for the first time in 1854. (It was not, however, used by Karl Marx who instead wrote about the 'capitalist mode of production.' His focus on business backers as the most important element of the economic system was the same, however, as was his condemnation.)

Before that, 'capitalist' had been used for some time to refer to a person who backed businesses financially but 'capitalism' made the whole economic system about these people. That was an exaggeration then and is much less accurate today.

Describing our economy as 'capitalist' overstates the importance of business backers and of the shareholding mechanism. There is much more to our system than that.

In contrast to 'capitalism', which hints at an economy dominated by a few rich oppressors, 'socialism' sounds more sociable, more caring, and nicer. (This contrasts with the societies that have resulted from trying various socialist schemes in reality.)

The terms 'capitalism' and 'socialism' also lead to *confusion*. This is because they refer to sets of different but similar economic systems, not to specific economic systems. Socialism, in particular, includes many different designs. There are variants that aim for equality of outcome and variants that aim for equality of opportunity. There are variants where the state owns factories and variants where the workers do. This is just the beginning of the extraordinary diversity. If someone simply says 'I prefer socialism' then they show that they do not understand this diversity or socialism.

4.4.2 Smears

Some terms not originally intended to express a negative attitude have associations that have been used repeatedly to smear the economic system used in the UK and others like it. These words probably should be avoided in teaching about money to reduce the risk of undue negative interpretations.

The term 'free market' suggests to some a ruthless market with no restrictions, which is not what advanced countries today operate. Today, markets are carefully managed and the intention is to create fair markets but usually without restricting prices.

It is better to just call markets 'markets' or perhaps 'fair markets' to distinguish the ones we try to have today from the markets that often develop when there is a free-for-all.

Markets described as 'competitive' again suggests ruthlessness to some. The sense is that in these Darwinian struggles some succeed while others perish. In reality, the expansion and contraction of businesses is usually gentler and the final days of most businesses can be anticipated long in advance. Ideally, movement of employees should be incremental so that it is not necessary to make people redundant at short notice.

Instead of describing markets as 'competitive' it might be more appropriate to describe them as markets where participants have free choice.

The term 'profit' has also become a pejorative term due to its use in politics. It puts the focus on money given to shareholders and away from the much larger aggregate payments to employees.

When a business operates it provides valued goods or services to customers who pay money in return. This is the revenue of the company. It is then distributed to the other stakeholders in the business.

Typically, a large percentage goes to suppliers and a similarly large percentage goes to employees (including the Board of directors, who typically make up only a small percentage of the total pay bill, even though individually their rate of pay may be high). A small percentage goes to the government as taxes. A small percentage goes to backers in the form of interest paid and dividends[2] (which might not be paid at all if there is not enough money left). Any money left after all that, known as retained profit, stays as assets of the business to be used in future.

For legal and accounting reasons, the normal approach is to calculate a profit number before dividends are paid in order to work out how much can be paid to shareholders. If the focus is on how much of this profit the shareholders get then it seems they are doing very well for a contribution that many people do not see or understand. However, if the focus is on the shareholders' slice of *revenue* then it is evident that they only get the left over scraps.

Another example of the pejorative use of 'profit' concerns the perceived difference between 'profit making' and 'non-profit' organizations.

If we compare a company with a charity, there are surprisingly few differences. The charity's financial backing is not provided by shares and it is not usually the beneficiaries of the charity's services that pay but generous donors. (The donors and volunteers are the generous ones, not the paid charity workers.) However, in both organizations something useful is done and there is money coming in and money going out, mostly to employees. However, the excess of income over expenses is called 'profit' for the company and 'surplus' for the charity.

The difference between a 'profit making' and a 'not for profit' organization is surprisingly small because the scale of the profit/surplus tends to be small compared to the total income and the amount given to employees. This is particularly obvious for private schools in the UK, which are usually charities even though almost all school fees are paid by the parents of the students.

It might be better to refer to 'accounting surplus' and 'accounting deficit' than to 'profit' and 'loss', even when discussing companies.

5. A curriculum

This curriculum outlines the topics that could be taught and some key points to make.

In most cases, teaching need not go much further than explaining the points and then using activities that require recall and use of the material. (This is different from the specifications for many school subjects, where small bullet points often refer to topics with many details and skills involved.)

5.1 The basics of work, money, and markets

The work and other real resources needed to sustain our lives:

- To provide food, shelter, transport, education, etc.
- Work can be paid or unpaid.

Work and resource consumption required for:

- Necessary products.
- Luxury products, including extremely wasteful consumption.
- Prevention and remediation to deal with behaviour and other problems that could be avoidable (e.g. crime).

Why money is useful (helps to counter smears against money as somehow dirty and corrupting):

[2] The percentage for dividends has been increasing over the past decade in many countries (Valeeva et al, 2022).

- We are a naturally cooperative species and thrive on it.
- We specialize and exchange.
- Money builds on the reciprocity instinct (i.e. cooperation).
- It is an accounting method for favours done for people.
- It makes reciprocity more exact.
- It enables reciprocity to work better between people who are not close friends, when a direct swap is not possible, and in n-way trades spread over time.

Money should not be an end in itself (and usually isn't):

- It must be exchanged for products of value (e.g. shelter, food, cleaning services) to benefit us.
- Money provides security in old age, but only in a stable society.
- You can be happy in the UK without being wealthy.

Why it is morally fine to get paid (debunks attempts to smear people for getting paid to do something):

- Being employed for money involves a mutual agreement to cooperate.
- Being paid for doing something lets you do more of it.
- Having more money means you have more influence and can use that for good.

What is needed for a money system to work well:

- Consistently steady value for the currency with no serious worries about its future value.
- No doubts about authenticity (i.e. no forgeries).

Why markets are useful (debunks arguments that smear markets as heartless struggles for survival):

- They bring together people and information so that better deals can be made.
- They let us use our purchase decisions to influence who provides products in future and which products those are.
- They let us use our sales decisions to influence who gets our support in future and how.
- They also give us choice about who to work for.
- Markets distribute economic decision making, involving more people and information.

What is needed for markets to work well (debunks arguments that markets are unfair free-for-alls):

- Information is available to participants about what is available and at what price.
- No unfair advantage is given to any participant by government.
- Monopolies and cartels of supply or demand are blocked by government, which means customers have a choice of what to buy and from whom, and employees have a choice of employer.
- Various exploitative practices of deceptive products, descriptions, pricing, and contract breaking are outlawed and this is enforced.
- Buyers shop around and sellers provide information about their products that helps buyers make good choices.
- Agreements are made with consideration of long-term relationships; short-term exploitation is unfair and unhelpful.

How markets help us continually adapt and improve (debunks the idea that markets are inherently aggressive and exploitative):

- Well-managed markets give people choices and distribute decision making across everyone, using collective wisdom and distributed information.
- Those choices cause some businesses to start and expand while others contract and close down. People also switch employer based partly on how well their company is doing.
- Businesses that can't offer much value or consume resources wastefully must improve their contribution or the people involved must choose to do something else.

Improvements to our economic system since the 1850s (the time of Marx):

- Markets are now managed to make them much fairer.
- Our society is now much more meritocratic because of academic selection by objective assessments and job selection by suitability.
- We now have a large welfare system that redistributes money and allows us to provide lifelong mutual care.
- Many ordinary people are owners of businesses through self-employment and share ownership, directly or through their pension funds.
- Many leading countries understand that trade with each other is better than war.

5.2 How to make good choices

How to manage your money through life:

- Seek work roles (paid or unpaid) that help others. Do your fair share of the work needed for our lives.
- Don't waste money or real resources such as time, water, energy, food; even small daily savings of money and real resources accumulate over a lifetime.
- Try to build a financial reserve early for a smoother life. Save for retirement if you can.
- Choose your lifestyle (and spending) to stay within your income and earning potential.

How and when to:

- Borrow (loans, mortgages).
- Save (savings accounts, fixed term deposit accounts, buying long lasting assets, e.g. land, shares, gold).

Sources of money during the decades of retirement:

- Wealth saved earlier spent on an annuity or self-managed.
- State Pensions.

The surprising power of small increments over time:

- Compound interest on savings.
- Compound interest on borrowings.
- The effect of small daily savings accumulating over time.
- The effect of a little additional income accumulating over time.

Ways to manage personal financial risk:

- Use insurance to cover major potential shocks.
- Build up savings.
- Avoid massive unsecured debts.
- Do not put all your wealth into one risky venture.

The elements of a decision:

- Alternative courses of action, that you may have to generate perhaps in stages.
- Consequences of those courses of action.
- To be compared; always it is a comparison not an absolute value.

How to decide well:

- Go through the thinking more than once.
- Get more information when you can, after thinking what might help you decide.
- Calculate if you can.

Beware of speculation:

- If it seems like easy money, it's probably a scam (e.g. crypto tokens).
- In markets where no real value is being created, the gains of some speculators come from the losses of others. On average the house is the only consistent winner.
- Consistently knowing better than everyone else is almost impossible.

Ways to get rich (debunks the argument that all rich people must be evil and should be hated):

- Bad ways – robbery, fraud, extortion, cheating, manipulating markets, unfair exploitation.
- Lucky ways – speculation, lottery wins.
- Family ways – inheritance, marriage.
- Doing work of value to others, getting paid, and not spending much (i.e. not asking for much work/stuff ourselves).
- Creating and improving an asset (e.g. a company, a building) that you own and that appreciates in value as a result.

Ways to do good with money (also debunks the idea that wealthy people must be evil and should be hated):

- Do not consume wastefully.
- When buying, consider carefully so that your purchases encourage good suppliers to continue providing good products (e.g. useful, sustainable, efficient, kind).
- Invest in businesses that deserve to expand and not in others. Examine companies carefully and direct finance wisely.
- Have good ideas to help people and make them happen using your money. Also back good ideas of others (e.g. give to charity).

Forms of economic inequality (debunks the idea that wealth inequality is the big problem):

- Wealth differences are the largest. Driving factors include age; older people have had longer to build savings.
- Income differences are smaller. Driving factors include scale – economically benefiting more people brings larger income.
- Spending differences are smaller still.
- Real resource consumption differences are even smaller. These are the ones that really matter.
- Differences in utility from consumption. These may be large but are not directly driven by real resource consumption.

How we describe financial hardship (tackles frequent misconceptions):

- Key concepts: income vs wealth vs consumption vs material circumstances; individual vs household; relative vs absolute.

- Most measures of ‘poverty’ in the UK today are relative; you can be ‘living in poverty’ in the UK but luxury compared to someone in another country.
- People who are ‘homeless’ are almost always living in a building but the arrangement is temporary; the term for people who have no shelter is ‘rough sleepers’.

Why some people have low wealth (debunks the idea that it is always due to one cause):

- Young (start of a career).
- Old (last financial reserves).
- Long-term illness or disability of the poor person or a family member.
- Poor risk management (e.g. not building reserves when you can).
- Poor financial control (e.g. spending more than you earn).
- Bad luck (e.g. sensible investment gone bad, steady job unexpectedly lost).
- Low cognitive ability and/or self-control.
- Family culture of not working.
- Victim of crime (e.g. savings fraud).
- Committing crime, so not reporting income.
- Lack of family support during a personal financial crisis.
- Not understanding or accepting the individual responsibility to contribute by helping others.
- Other reasons.

5.3 Businesses and their backers (i.e. investors)

How businesses function:

- Useful products are provided to customers who pay money for them.
- Various people do things that make the business possible (e.g. working to make products, managing that work, providing money to get the business started or make it larger).
- People who do things to make the business possible are given some money in return for their contributions.
- If the money coming in is more than the money going out then the business tends to get bigger and does what it does for more customers.
- If the money coming in is less than the money going out then the business tends to get smaller and does less for people in future. Eventually it must close because it is not making good use of resources, compared to alternatives; people move on to doing something else.
- Businesses that are expanding in a growing market usually give higher pay and promotions to employees as they expand. Businesses that are contracting in a shrinking market cannot shield employees from the financial problems for long and will tend to pay less, promote less, and make employees redundant more often.

The role of people who back businesses:

- Some businesses need a lot of setting up before they can start helping people.
- Being given some money by a backer enables the new business to pay for what it needs to get started. Only the backer takes the risk of losing money.
- Some backers don't even demand an agreed payment for the money they provide, but they get some indirect control of the business and expect some share of the money given by customers. These are ‘shareholders’.

- Other backers only lend some money temporarily and the agreement gives them a specific payment for making the loan.

Almost everyone does work, and most do work that is valuable (debunks the idea that managers and shareholders are freeloaders):

- Some people make goods or provide services directly (e.g. baker, farm hand, person on a production line, shop worker). They produce the basic products. Huge benefits to everyone if they do this well.
- Some people provide support services to the primary workers (e.g. supervisor, HR administrator, accountant, company director). They should make the efforts of the primary workers more effective, efficient, and valued. Also, they should guard against problems that might destroy the business. Huge benefits to the lives of others if they do this well.
- Some people decide which businesses to invest in, continually considering information and revising assessments (e.g. bank lender, shareholder, market analyst). They direct the flow of investment towards promising businesses and away from poor businesses. Huge benefits to the lives of others if they get this right.

How businesses share out the benefits of what they do:

- Most of the value goes to customers, who pay less than the product is worth to them (or they would not buy).
- Most of that money (from the customers) goes to employees (typically).
- A lot goes to suppliers.
- A small fraction goes to pay taxes (i.e. to the government).
- A small fraction goes to lenders.
- A small fraction goes to the shareholders (i.e. often financial institutions using the savings of ordinary people).
- Some is held back in the business for a rainy day or to allow it to adapt or expand.

Why profits are not bad (debunks arguments designed to make us hate businesses):

- An accounting profit is just the amount of revenue left after paying suppliers, employees, and interest to lenders. It is used to calculate the amount going to government and shareholders.
- Having a 'retained profit' after paying government and shareholders means the business is doing something valuable efficiently.
- It allows the business to do more of it by expanding or at least adapting; nobody takes the retained profit home.

Why money is given to shareholders (also debunks the idea that shareholders are evil freeloaders):

- As backers they (or the previous holders) allowed the business to get started or grow.
- They do useful work by evaluating the company, its assets, and its prospects; share price reactions to announced plans can be useful feedback; share prices may encourage businesses to sell more shares and expand or buy back shares and contract.
- They may assist by voting. Directors are pressured to behave well in part by shareholders who might vote.
- Their goodwill will be needed if more money is asked for in future. The company must show that backers will be rewarded.

- Although the amount may seem large it is usually a small percentage of the money coming in and far less than paid to the employees.
- Many shareholders today are ordinary people, or people using the pension funds or the savings of ordinary people; they are not all greedy ‘fat cats’.

5.4 The contributions of financial institutions

What financial institutions do that is useful:

- Act as backers using their own money and money lent to them by their customers (**banks, fund managers**).
- Pay people money to help them through major financial emergencies (e.g. your house burning down) (**insurance companies**).
- Lend money to trustworthy, productive people to allow them to smooth their consumption through life (**banks, building societies**).
- Run systems that move money electronically (**banks, payment system companies**).
- Exchange money from different countries so that people can trade across borders (**banks, payment system companies**).

Methods of payment:

- Cash (notes and coins)
- Debit card
- Credit card
- Phone (various systems)
- etc

5.5 Government

Why governments collect taxes (debunks the idea that tax is theft):

- To provide services (e.g. health, roads, education).
- To provide mutual support through life and in adversity via social security systems.
- To create helpful incentives for citizens (e.g. to discourage boozing).

Why governments do not tax people equally:

- To create incentives.
- To tax people more when it is easier for them to pay.

How the public sector involves others in economic decision-making:

- Publishing performance statistics and inspection reports.
- Giving a choice of provider (e.g. schools, doctors).
- Consultations and petitions.
- Allowing citizens to vote for politicians (who are then supposed to manage the performance of public sector employees and stop them exploiting their monopolies).

6. Implementation issues

The main purpose of this paper is to suggest and justify a possible curriculum. However, the challenge of implementation follows directly, so here are some suggestions on that topic.

6.1 Timing

The curriculum above does not show when each point would be taught. Some points might be mentioned repeatedly over years and gradually developed. Others might only be taught once, probably towards the end of schooling.

Particularly good times to discuss this material might be when students are making decisions with implications for their adult lives (i.e. GCSE option choices, choices for post-GCSE, possibly tertiary education choices).

The existing schemes for financial education (in PSHE and more generally) show how to spread teaching through the years and these could be a starting point. The additional material would be arranged around the existing schemes.

6.2 Individual differences

Young people differ in their learning abilities (often subject-specific) and in the amount they have learned about money, life, and the economy from their parents and by their own efforts.

The teaching should focus on ensuring that basic points are understood and retained. Although it is not possible to ensure that all students learn it all, most should be successful provided the teaching stays close to the suggested curriculum and does not include too much abstract, difficult, additional material.

6.3 Assessment and recognition

Knowledge of money and the economy is inherently useful to students and so more interesting to them. Also, employers will be glad to see it. However, just presenting good, interesting, useful material is not enough on its own.

Learning about money and the economy must be assessed through objective testing and recognized through at least one standardized qualification. Students, teachers, head teachers, and schools should be judged, in part, on their success in teaching about money and the economy. The qualification should help students get places on higher education courses.

This is essential if the subject is to be taken seriously by schools and students.

6.4 Teachers

To teach most of this curriculum requires no more than being able to explain the meaning of each bullet point. In some cases a chart or some figures are needed to illustrate the points and these can be provided to teachers.

Many teachers would be able to say more just based on their personal life experiences.

It should be possible to find enough teachers capable of covering this material with only a couple of days of extra reading and the usual lesson planning time.

(Many parents would need less time – just what is needed to read a slim book and reflect on what they think their children should know.)

6.5 Computerized teaching

Some of the teaching work can be automated using computers. This is already done to some extent with many school subjects, although there is room for improvement.

Students could watch videos, read text, and take tests online. Sophisticated simulation games that teach this content would be possible but perhaps expensive to create. However, there are already some genres of game that teach useful concepts.

Many games give players careers. Their characters amass skills/experience, gold, jewels, weapons, other equipment, clothing, and so on. They do this faster if they play more competently. Simulations of businesses (e.g. theme parks) teach the value of pleasing customers, responding to problems, and investing in research and development. Other simulated worlds encourage efficient farming, manufacturing, and construction. They also, usually, encourage conquest of other civilizations, which is not so helpful.

6.6 Competition for teaching time

To teach more about money requires spending less time teaching something else. Teaching about money must compete for teaching time with the subjects already taught and with other worthy subjects that should be taught more (e.g. basic laws, healthy living, sustainable technology, consideration for others).

The simplest course would be to remove an entire subject that is currently compulsory and reallocate the time to more useful things. The obvious candidate for reduction is English Literature, which is currently compulsory in the UK for most children at GCSE. It is particularly unpopular with many boys and contributes to the difference in overall average attainment in exams between boys and girls.

However, detailed analysis of almost any GCSE subject reveals opportunities for reduction and replacement, including mathematics, which is already where money skills are occasionally developed.

6.7 Power struggles

If it was easy to change what is taught in UK schools then surely we would have seen more change over the decades. Power struggles seem to be the cause of some delays. Even when most people agree change is needed the fight over exactly what to do instead can cause long delays and even block reform.

Some teachers might see a change negatively as more work for them, rather than see adapting to society as a normal part of their job. Others might see the change as threatening their jobs because they are specialist teachers of lower value subjects (e.g. Latin, Art, English Literature).

Teachers' unions might see a change as an opportunity to negotiate for more and to show their members that they are doing something beyond collecting subscriptions.

Specialists in economics and economic teaching might seize the opportunity to get their personal theories included. There might be pressure to expand the curriculum to such an extent that it is too large to be taught.

People with political goals might try to get their perspective taught as fact, or at least as one valid view.

People with misconceptions about money and the economy of the UK (including, perhaps, professors of the subject) might object strenuously that the curriculum is wrong.

Some educationalists might criticize the curriculum for teaching facts instead of problem solving or learning skills – as if children should work out for themselves how money and the economy operate.

The suggested curriculum and the other ideas suggested are designed to minimize these objections and power struggles. Even so, objections and power struggles are inevitable and would have to be overcome.

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