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Using Recent News and Mapping to Teach Real Estate Finance

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The Real Estate industry employs millions of people in developing, servicing and managing land and buildings that comprise two-thirds of global real assets or net worth (Woetzel et al., 2021). Investing and financing this real estate is therefore an important topic for business students. A course in real estate finance would include subjects such as whether one should buy property or rent, real estate valuation to determine a good price, sale and lease-back to finance emergency-time needs, whether real estate should be a part of your portfolio investment and if so how much, how to finance your real estate investments, whether you should invest in commercial real estate or housing, how to finance the development of real estate, the different forms of real estate ownership and their tax implications, and of course risk management. Different textbooks would have different ways to organize these and other topics (Brueggeman and Fisher, 2011, Sirota and Barrell, 2015). Finance textbooks may or may not have a chapter dedicated to real estate finance but usually provide examples that include this sector (e.g., Brealey et al., 2017).

Most of these topics could be detailed further in a topic map. For example, real estate values may include the income method, market comparables, replacement cost, and computer modeling with different estimates of net present value and internal rate of return. Similarly, the question of where to invest would also be determined by whether you're taking an institutional investor's viewpoint or a personal investor's viewpoint. For sectors of real estate, probably a different analysis is required for office complexes, retail complexes, industrial complexes, hotels, or residential apartments. For investment funds, the question that can be posed is who is going to manage your fund: is it very focused managers or more general managers? More financial issues that could be covered include the extent of leverage, the duration matching, the timing of investment, and the nature of interest (fixed or variable). Similarly, for real estate development, the importance of trying to get municipal support for developing affordable housing or for commercial property needs to be explained. Real estate educators need to keep in mind that more and more, getting municipal financing or regional financing would require constructing environmentally friendly buildings. Probably, there may be a need to construct many different scenarios and simulate the income possibilities from these before deciding on what kind of real estate development one may want to do on a particular site.

The large number of possibilities indicates that there is a risk of not making the optimal decision. Combining these possibilities with probabilities, one could do different kinds of scenario analysis, sensitivity analysis, and what-if analysis. These scenarios could take into account some common concerns such as the interest rate risk and portfolio risks, the effect of inflation and recession, tax changes, foreign currency risks, geopolitical risks, and sector over-investment. For emerging markets, there would be additional risks coming from a lack of clear titles, institutional voids, and far greater information asymmetry. These risks also arise from the broader opportunities and threats in the environment: for example, population increase, emigration or immigration, urbanization, economic growth and recessions, the fight for decarbonization and green certification, safety regulations, and technological changes. In a world of increasing volatility, uncertainty, complexity, and ambiguity (VUCA), textbooks are not sufficient to understand and appreciate these recent opportunities and threats. There is a need to update knowledge through the reading of newspapers and transmit new concepts to students to reinforce and update their textbook learning so that they enter the business world adequately prepared.

This article presents a few recent cases, taken from financial newspapers, which illustrate many different aspects of real estate finance and see how these cases could be used for teaching different aspects of a course. For teaching complex relationships, it is suggested that students engage in mapping. To illustrate this, some recent news items affecting the real estate sector will be analyzed using concept mapping. My classroom teaching for financial subjects indicates that students prefer making mind maps rather than concept maps, while I would prefer them to see relationships and not just associations. This article focuses on some of the larger cases which have taken place recently including Evergrande in China, Blackstone in the United States, the state of the industry in Europe, and safety certification in Turkey. It also looks at the opportunities created by technological changes such as blockchain development and how it may contribute to financing real estate and managing its risks.

A short note on mapping

To understand the above-mentioned cases, which may seem complex to neophytes, I will use mapping. Mapping is a form of active learning: learning where the student is not a passive recipient of knowledge but rather perceives it through active engagement. Active learning increases the confidence of students in expressing opinions, the ability to work in teams, and self-learning, in addition to deepening knowledge and elaboration of knowledge (Healy and McCutcheon, 2008). Mapping refers to lines drawn between different nodes to show that they are linked. This technique has been used for centuries as a way for people to record the link between subjects. However, it has been formalized in the 1970s with terminology such as topic maps, concept maps, and mind maps.

Topic maps would be used by instructors to indicate the various topics in their course and a hierarchical link between these topics.

Concept maps are used to denote the link between concepts. While a traditional formal concept map may be hierarchical going from the general to the specific (Novak and Cañas, 2006), it is now accepted that there are a large variety of concept maps (Ahlberg, 2004). I use them in a sort of free-form exercise which then helps students understand relationships between concepts. Typically, concept maps have arrows indicating the direction of the relationship. At least, this is how I use them in my teaching.

These are slightly different from mind maps, that have been developed to describe the association between different concepts (Buzan and Buzan, 2002, Buzan, 2006). In mind maps, usually, there is a central concept or a node, and the other concepts are linked to this central concept. Some of the other concepts could also be related to other concepts and this would then create other nodes. Typically, mind maps do not have arrows indicating the cause-effect relationship. My experience shows that students are quickly able to create mindmaps when reading news items, but they do not take the time to look at the cause-effect relationships.

Any kind of mapping exercise involves active learning, facilitating learning and retention. Moreover, there is a socialized context since the newspaper article that I provide is a social object. Finally, I divide students into groups and provide each group with a news clip that they need to summarize in one slide. They usually have thirty minutes to do this, at the end of which they have to provide a one-minute presentation to the class on the creation. Students invariably use free software on mind maps for their creation. If time permits, I then show them the concept map that I created for the same news article(s).

In this article, I will show examples of concept maps that I could use to teach a course on real estate financing, based on newspaper articles. While I have taught courses linked to the financial environment, I have not covered real estate finance. The cases selected below illustrate the diversity of real estate financing.

Evergrande: over-using leverage to grow too fast

The most interesting case to illustrate the bankruptcy impact of taking too much debt and growing too fast is Evergrande, in China. The Urbanization of China with workers coming into cities, led to a huge demand for housing, evidenced by high price rises. To cater to this demand, real estate developers such as Evergrande, took loans to build houses. They were encouraged by municipalities that needed to sell land to have revenues. From the 1990s till 2010, a significant engine of Chinese growth was the property market. As a result, both home buyers and construction agents felt secure that the market was too important to fail. Risk perception was low.

In 2020, the Chinese government became worried about the over-indebtedness of the sector and asked banks to rein in lending to real estate developers. The "three red lines policy" required real estate developers to hold cash equal to short-term borrowing, limited liabilities to 0.7x assets, and required net debt to be equal to or below equity. As a result, Evergrande and other over-indebted property developers could not get the liquidity to pay suppliers and employees, and service bank and international bond payments. Evergrande missed an international bond payment in October 2021. Although developers tried to get customer financing in the form of pre-sale revenues, this was not sufficient. Suppliers stopped sending material and employees stopped working. Therefore, many homes remained unfinished. As a result, borrowers defaulted on their loans taken to finance the purchase. They asked Evergrande to reimburse their money. Unsold homes increased and home prices fell since developers offered huge discounts for new homes. Evergrande had taken many short-term loans to finance its long-term needs and this maturity mismatch also played a part in its collapse.

Just as the governments in the US bailed out the big banks during the crisis, the Chinese government finally relented and in January 2023 it had to create bailout funds to give special loans to developers to complete unfinished homes. Many local governments bought unfinished homes to create low-rental housing. The government had also to reduce the interest rate for home buyers. Finally, they reduced taxes on selling homes if one buys a new home. These government support measures reduce the cost of housing and finally, the share prices in property companies went up slightly.

In the meantime, the decision to buy or rent was also affected. Young people decided that the risk of paying for a home that is not completed was too high. Instead, they preferred to rent homes. Rentals are also increasing as the Chinese government is providing more low-rent housing. The concept map (Figure 1) catches the above explanation, combining a news item of the problem (Yu and Mitchell, 2022) with a more recent one with the government's recent bail-out (Hale et al., 2023).

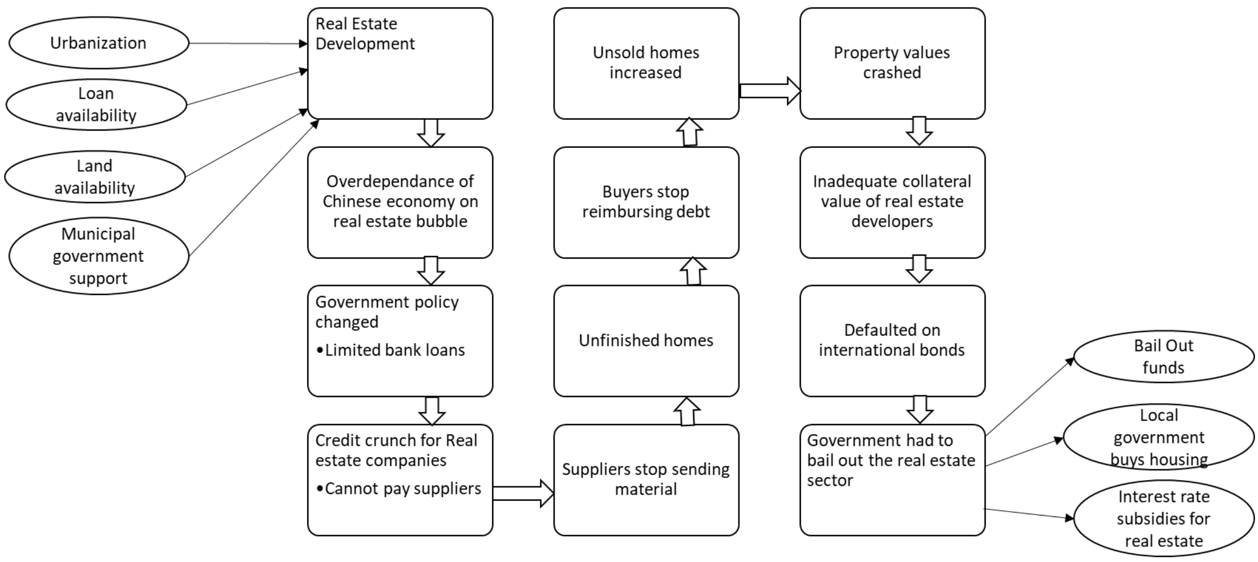

Figure 1: Concept map explaining the problems of the Chinese real estate market and proposed policy solutions.

Blackstone: The effect of interest rates on real estate investment funds

Blackstone invests in and manages assets on behalf of pension funds and other leading institutions. This means that they manage assets for others and they don't take on the balance sheet risks directly. They serve institutional investors all across the world, including pension funds. They consider that they are providing financial security if they can make the funds grow for all the people who will retire. Blackstone also invests, for its own account, on a global basis in a range of asset classes including private equity, real estate, and public debt. In these cases, they own the investments and the need to make the businesses grow. The main investment areas are real estate, private equity, hedge funds, and credit insurance. The Blackstone Fund was founded in 1985 by Peter G Peterson and Stephen A. Schwarzman with $400,000 in seed capital. It is now worth about $95 billion, a growth of about 238,000 times in 38 years. Their income statement for 2021 indicates that they have grown 70% over the four years 2017 to 2021. Their revenue model includes a fee on the assets that they manage and a Commission on getting performance-based revenues. The 2021 activity report also indicates that half the capital invested in 2021 was in strategies that didn't exist five years ago. What this means is that large successful real estate firms are looking at the changed environment and adapting to the change rapidly. Therefore any course in real estate finance needs to focus on environmental changes that affect real estate performance.

Of course, the work of Blackstone receives its share of criticism. For example, they invested in companies linked to the commercialization and deforestation of the Amazon rainforest. Another report indicates that Blackstone had abused tenants with exorbitant fees, rent hikes, and aggressive eviction practices (Vandevelde, 2023). As a corporate strategy, landlords can offer to delay payment but if people still don't pay, they need to evict them. Evictions create a negative image especially because Blackstone is large and may need to evict many tenants. Therefore even if Blackstone has been far more patient than the average landlord, there is a higher chance of its image getting tarnished. This then creates a reputational risk for investors. Blackstone uses its financial clout to influence politics to ensure there is no rent control. All of these provide lessons in risk seeking and risk management, opening up discussion on business ethics.

One of the strengths of Blackstone is its high-productivity culture. However, if they merge with other businesses, ensuring high performance requires spreading this culture to the businesses they acquire. Each business that they buy has its own culture and changing culture is not easy. However, if they do not grow they will not attract people who want high performance. So, for the financial manager, it is important to have an understanding of other aspects of management which may not have been important or perceived as important forty years ago.

In 2022 and 2023, interest rates have been increasing. For Blackstone, this is a threat because households and businesses may not take loans when property prices decrease. Therefore, the investors in real estate trusts will want the money back. Blackstone's strategy has been to limit redemptions in their real estate funds to 2% per month or 5% per quarter. Another strategy to combat this need to return money is to search for larger institutional investors, such as the University of California, and use these funds to pay off the small retail investors who want to withdraw. The problem with these strategies is that once customers don't get their money back, they will make noise and this will then create repercussions where other customers will also want their money back. Moreover, institutional investors would want a sweet deal which means that Blackstone will be paying more than what they were paying the retail investors. The concept map (figure 2) captures this discussion based on a newspaper article (Vandevelde, 2023).

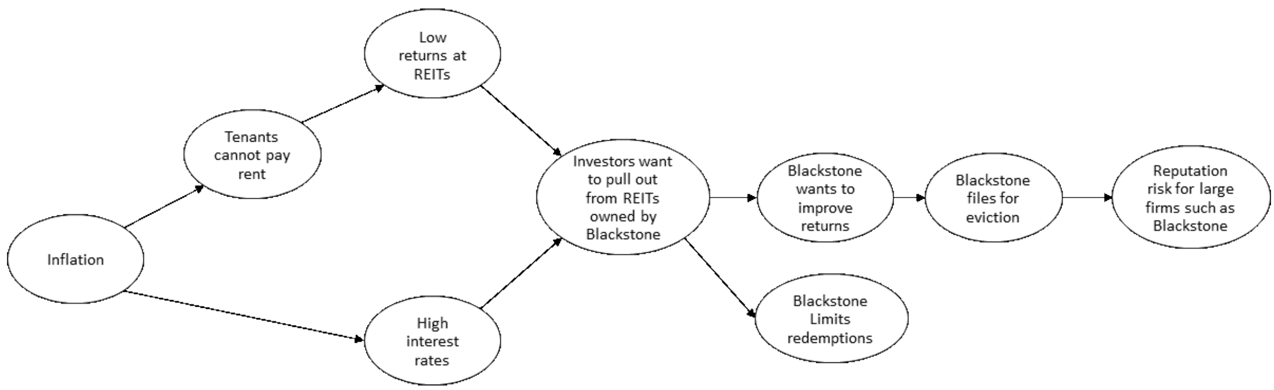

Figure 2: Concept map explaining why inflation and high interest rates lead to evictions.

European Real Estate Price falling

In 2022 and 2023 interest rates have been increasing. For Real Estate owners, this is a threat because households and businesses may not take loans when property prices decrease. Higher interest rates may also indicate lower growth expectations for the economy as a whole, again depressing property prices.

Another phenomenon that has been affecting European real estate is inflation. Owing to inflation, many people are not able to pay rent. Property owners gain on paper as property value increases but they may not be able to sell their assets.

The real estate market is also affected by the increasing trend of working from home. This impacts housing as well as office properties. Housing prices increase for larger homes as people want nicer homes to work from. Office property prices decrease since less workspace is required. Office sharing is also becoming more common. The difficulties of banks in the USA, as well as Switzerland, have also taken their toll on investor wariness. The concept map (figure 3) indicates that all these phenomena are affecting the property market (Oliver, 2023).

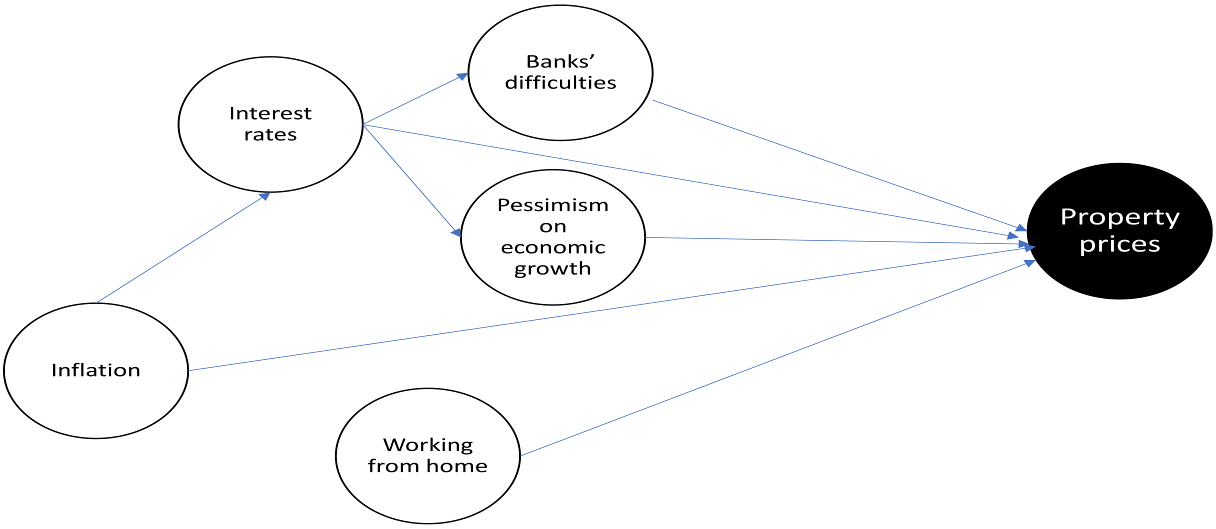

Figure 3: Concept map explaining falling property prices in Europe.

Türkiye: earthquake and need for certifications

Türkiye has a high risk of earthquakes. According to the world bank, the cost of the property destroyed during this year's earthquake was about $34 billion, including housing, offices, schools, hospitals, and infrastructure (Gunasekera et al., 2023). Rebuilding will cost about double that. This highlights the need for resilience in construction in such areas. Most of the buildings that collapsed seem to have had no respect for codes of construction in such zones or were built before the codes came into effect. The fact that no similar earthquake had occurred for over eighty years may have also made the constructors and certifiers lax.

The disaster helps us understand that the value of collateral for financing is strongly dependent on the quality of construction. Real estate financers, therefore, have to be vigilant in checking if the building conforms to norms. However, if loans have already been released before the construction is complete, it may be a moral hazard that banks have to accept unless they have the building work audited in stages before releasing each tranche of the loan. The concept map (Figure 4) illustrates our discussion.

Türkiye cut its interest rates further in the wake of the disaster to finance the reconstruction. However, this may lead to an increase in inflation and an increase in the cost of the reconstruction.

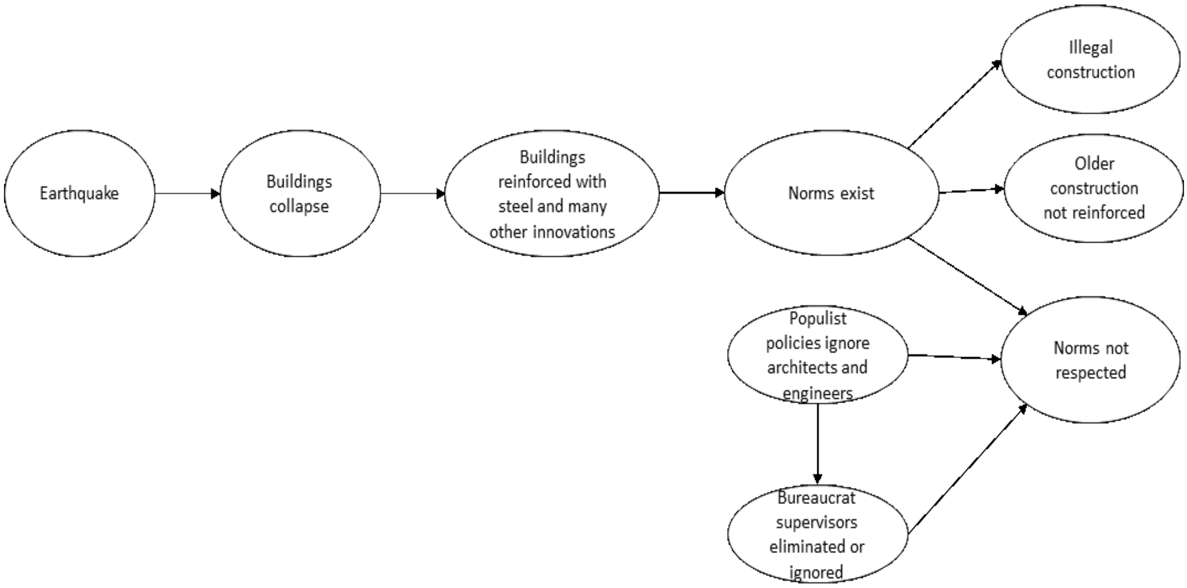

Figure 4. Concept Map explaining why earthquakes cause damages despite norms and certification

Cryptocurrencies and international real estate transactions

It is always good to insert recent technological innovations in a course. Blockchain and cryptocurrency are one such innovation. A good question has been raised in a recent Financial Times article on whether you would buy your next house with crypto (Kao, 2022). The context that the article provides is one where a lot of people from all over the world have been buying housing, internationally.

The article contends that people have made a lot of money in bitcoins, people have also made a lot of money during the COVID boom when they had added crypto to their portfolios. At the same time, COVID created a flurry of real estate transactions as people moved to less polluted sites in the mountains and near the sea, driving up property prices there. The question is whether they can combine the virtual and the real worlds for financing international real estate transactions. These transactions incur currency exchange fees. If the transaction is in a common cryptocurrency, there would be no fees for currency conversion at the time of the transaction.

Essentially, while it is admitted that crypto is volatile, there is no foreign exchange converting fee. Therefore, using crypto could reduce costs for buyers and sellers operating internationally. This would require a formal legal framework in the country in which the property is situated, it would raise difficulties in assessing the tax implications and money laundering risks because money is not being converted and the transaction may be fairly invisible. It would also require financing by people who are willing to take the mortgage based on crypto valuations. The personnel of real estate companies need to be trained to think in terms of cryptocurrencies. The country would also need a crypto exchange that will allow operators to make payments in real or virtual currency so that either the seller or the buyer could choose which currency he's more comfortable with. Therefore, the need for education and training encompasses not only students of real estate finance but also people working in real estate companies and people working in the governments of these countries. The concept map (figure 5) indicates the different relationships. The five concepts on the right side could also be viewed as a topic list that needs to be addressed to successfully use cryptocurrency for international real estate transactions.

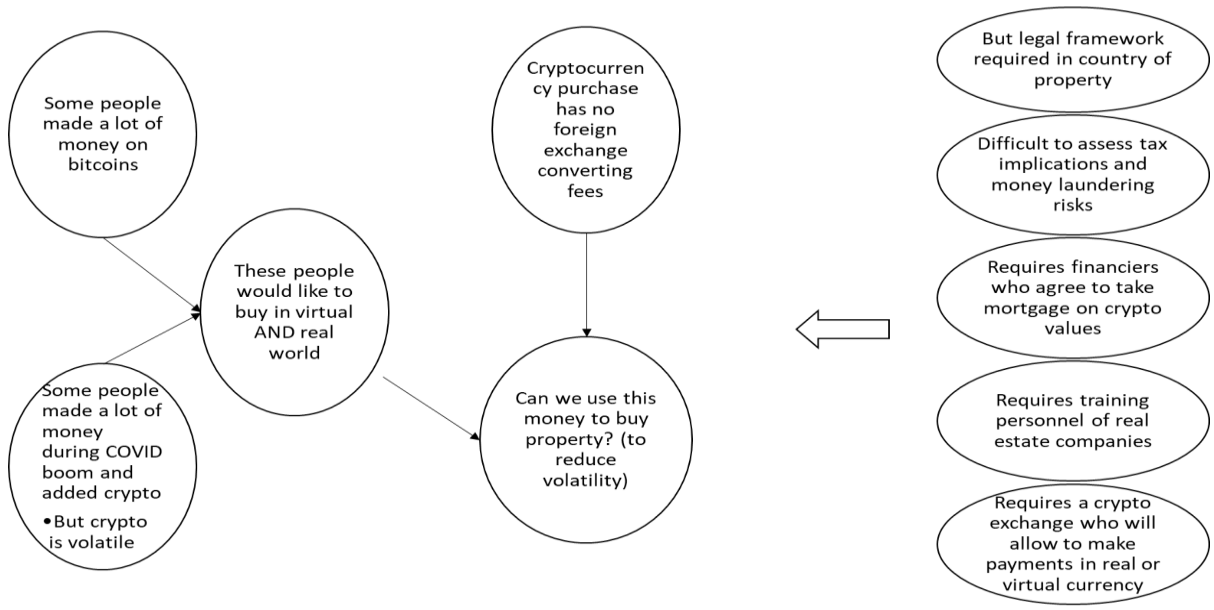

Figure 5: Concept map explaining the need and obstacles to cryptocurrency payments for international property deals.

Concluding remarks

What this article suggests is that in this VUCA world (Volatile, Uncertain, Complex, and Ambiguous), the speedy changes in technology, climate conditions, and economic events make it necessary to go beyond the textbook. Textbooks are good for explaining basic concepts, but the student needs to be aware of the current financial environment which the lengthy publication process of a book does not allow. Therefore, referring to recent news items must become an integral part of any real estate finance course. Using concept maps and mind maps, textbook logic can be introduced into the discussion of the news. This kind of active learning is enjoyable and if done in groups serves to motivate students to learn better.

While I have provided a few examples, there are many other topics mentioned in the introduction that could be picked up in recent news articles and understood by mapping. However, mapping is not the only form of active learning. Students could also learn from many other active learning techniques such as simulation games that could be introduced in the classroom. However, conceiving and designing these games may still take time, and updating them for the latest news may be more complex. This may change with the advent of large language models such as Chat GPT.

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