

# **The Business Perspective of Sustainable Housing**

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## **Abstract**

Construction of houses and also their structural and operational improvement, is being usually seen as a project, already decided, either to comply with the regulations, or to exploit the subsidies offered by the governments in such cases, or in many other cases as the way of restricting the energy costs and the respective benefits of energy efficiency interventions.

Ownership of a house and interventions on it, exceed economic assessment, while they represent the social status of the resident.

Decisions about investing in houses – that represent a part of real estate market – are based on economic forecasts and the speculation on early forecasting of the demand increment in a specific housing area. These decisions are business once, while they are considered only as financial.

This work is a proposal to examine building construction, acquisition and improvement as ordinary business and using the similar tools, such as balance sheet, profit/loss account and cash-flow.

JEL Classification: G11, M4, O18, R20

## **1 Introduction**

Considering that the theories about the evolution of our species are correct, the first act of civilization has been the construction of caverns (shelters) and the abandonment of the natural once.

Such housing is supported by archaeological evidence and those entitle to interpret them.

Those, our remote ancestors, were seeking for a shelter to provide them with a controllable protection of the nature and soon after from their most fiercest threat; fellow humans.

After millennia of evolution and especially after the consolidation of the European principals, economic stability, despite neglecting interpretations, house owners and potential buyers of houses (historical or newly constructed) are still devoting efforts to identify hat their choice is coherent and in what extend.

Assuming the management of a building it becomes a business.

As a business, it becomes a subject of several uncertainties (risks) against expectations. Accepting that expectations it reflects «pro-forma» evaluations, similar to every other kind of business, only much more simple.

Every private building has a market price. It varies over time, as affected by the demand for housing (people hosting or commercial or even industrial activities) in the specific area (city quarter, neighborhood, recreation area, holidays, market, transportation of goods and people, facilities etc).

Although buildings follow the general price trend of the area they have been constructed, each building (or apartment) has a different «price tag» which is influenced by its architectural characteristics, as well as by the «taste for beauty and /or social status marking».

The «Real Estate Market» has always been an important competitor of the trade market (not just the Stock Exchange Equity but also partnership in Small or Very Small Enterprises). Real Estate represents an investment (or even speculation) alternative to the private savings and also the various funds.

Involvement in Real Estate Investment is mainly driven by a triple prospective; profits, stability and expectations. Every money manager, either of his own or handling a «fund», makes a position choice within the bounders of such a triangle.

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Trading private buildings (short term speculation), investing in such (mid-term modernization of the interiors), or Legacy administration (exploit heredity), is also on the same rank of the investment, because heredity acceptance is similar to investment, assimilates commercial decisions, in what accepting the heredity of real estate corresponds to an investment on a scale of taxes over expected value of the heredity.

Owning a building is bringing up options, like making it a residence of the (new) owner, let it to rent, sell it, or change its characteristics and then let it to rent or sell it. When no option is adopted, the building will be, sooner than later, occupied by both people and rodents.

There seem to be many unanswered questions, within Academia, while in the political arena; is tolerable towards depriving ownership of real estate.

Modifications of energy consumption has little not effect at all to the price offered by the potential buyers.

Business connected to profits and orientated to Stock Exchange are using intermediaries, who are promoting and promising «big and fast profits». Loss is banned from their vocabulary.

## **2 Literature Review**

Most of the literature went through is using Net Present Value, as a measurement of the investments on the interventions on buildings (or building projects) in energy consumption expenses.

Noticing attention are the papers of:

1. Adhicari et al, «Net Zero Energy Buildings: Expense or Investment?». The paper is stating that it is effective, economic and affordable, when combined with Solar Energy.
2. Papadopoulos et al, «in their paper on «Feasibility of energy saving renovation measures in urban buildings; the impact of energy prices and the acceptable pay-back time criterion», are relating the Calories consumption to heat or chill a building.
3. Bullen «Adaptive use and sustainability of commercial buildings» examines the balance (assets / liabilities) consequences.
4. Kumbaroglu et al, are about to publish a paper about «Evaluation of Economically Optimal Retrofit for Energy Savings in BUILDINGS»
5. Banfi et al «Willingness to Pay for Energy-Saving Measures in Residential Buildings», found out that energy consumption of a building is important to the citizens.
6. Francesca Salvo "SURVEY AND ECONOMIC EVALUATION" is relating the socio-economic environment with the evaluation of the building construction.

## **3 Discussion**

Almost all of the published literature, when examining the economic impact, is making calculations of the Net Present Value of the savings that result from the reduction of «oil» consumption. This is arbitrary assuming that a. oil prices remain stable, and b. climate becomes stable.

Furthermore, «environment friendly» investments on buildings oversee that the material used has a life expectancy.

Any modification of existing buildings, as well as any changes on new construction plans, is proposed to take into account:

The time-span in which the engineering work or engineering interventions remain «state of the Art».

The time required to modify the energetic behavior of a building, especially when it is considered to demonstrate a «cultural inheritance», has not been taken into quantitative consideration, because it lacks any standard pattern response.

The literature review has not shown any relation between the cost of interventions on existing buildings or additional cost to new buildings, representing the savings to energy consumption, under

the assumption that any such cost has a «time to live – TTL» of 20 or less years in which it has to pay back the investor (Return on Investment = ROI) .

Cash flow has not been an issue of examination, while payments and future NON payments make a cash flow, some times positive (cash-in is exceeding payments), other times negative. Either the acquisition of an energy saving building or the modification of one, so that it saves energy, need liquidity to be transferred to either a supervalue to the owner (seller) or to cover the expenses of the improvement. While the cost has been well evaluated, cash flow is not.

The selling price of a building may be increased in proportion to the investment on the energy saving installments and devices.

#### **4 Conclusions**

Buying a building or spending to improve its energy performance, is the acquisition of value which reflects cash payments, it has to be counter-balanced to the future savings for energy.

Investing in a building is a business, and as such it has to exploit all the entrepreneurial techniques, mostly Marketing, because from Marketing depends the demand and from demand the market price.

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