

Everyone's Smart University

Project (Spring 2021)

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Project Risk Management

A Living Arrangement For My Family

A. Introduction:

For any family everywhere, a house is an important asset to secure the future for the family especially in those difficult times with high rent costs ,”in construction industry, projects demand for risk assessment as they are the key reasons for cost and time overruns” ⁽¹⁾, it is important to secure the family future with owning a house if it is achievable financially, studying the risks is important as it is important to know what are we as a family are heading towards especially since it has been announced that the government have a goal of almost doubling the population of Riyadh (the city which I reside) in the next 8 years., my budget for now is 1.5 million (+10%) and that is subjected to change.

A brainstorming session was done with some experts whom are friends, “when brainstorming done right is an exhilarating, exhausting process. The personnel mix in a brainstorming group is crucial. Ideally, the group includes at least one and at most two "idea fountain" types, the kind of people whose brains automatically generate 10 ideas for every one being discussed” ⁽²⁾, the option of Risk of buying vs building vs renting but this option will be detailed in an EMV analysis, here is what we came up with as initial risks if I decide to build:

- 1- Risk of contractors not continuing the work.
- 2- Risk of fire.
- 3- Risk of injury to me or any worker.
- 4- Risks of delayed material delivery.
- 5- Risk of wrong implementations of work (my instructions).
- 6- Risk of improper MEP connections.
- 7- Pothering a neighbor and making their house dirty.
- 8- Theft of some materials.
- 9- Delayed infrastructure connections.
- 10- Insufficient supervision work.

Previous experience has shown that “risk management may approach with this research is to study to types of risks management must be of critical concern to project managers” ⁽³⁾, which is why the risks identified are two types, one type are the risks of building the house and the other is whether to build the house or rent based on 20 years of calculations, I am planning to have a house for me and my family whom are 5 people, me, my mother, my wife and 2 kids. I am planning to have at least 3 more kids so the house must accommodate that which means the house will hold 8 people during the next 10 years by God’s will, that will affect the rent range as the apartment I live in cannot hold that many people.

B. Risk Analysis:

I- Risks of constructing a house:

Before a quantitative analysis is made, the listed risks above must be filtered, A risk score for each category of causes is identified using probability and impact analysis ⁽⁴⁾, in table number 1, each risk will be stated with its probability and impact, it will demonstrate the control measure that will be placed.

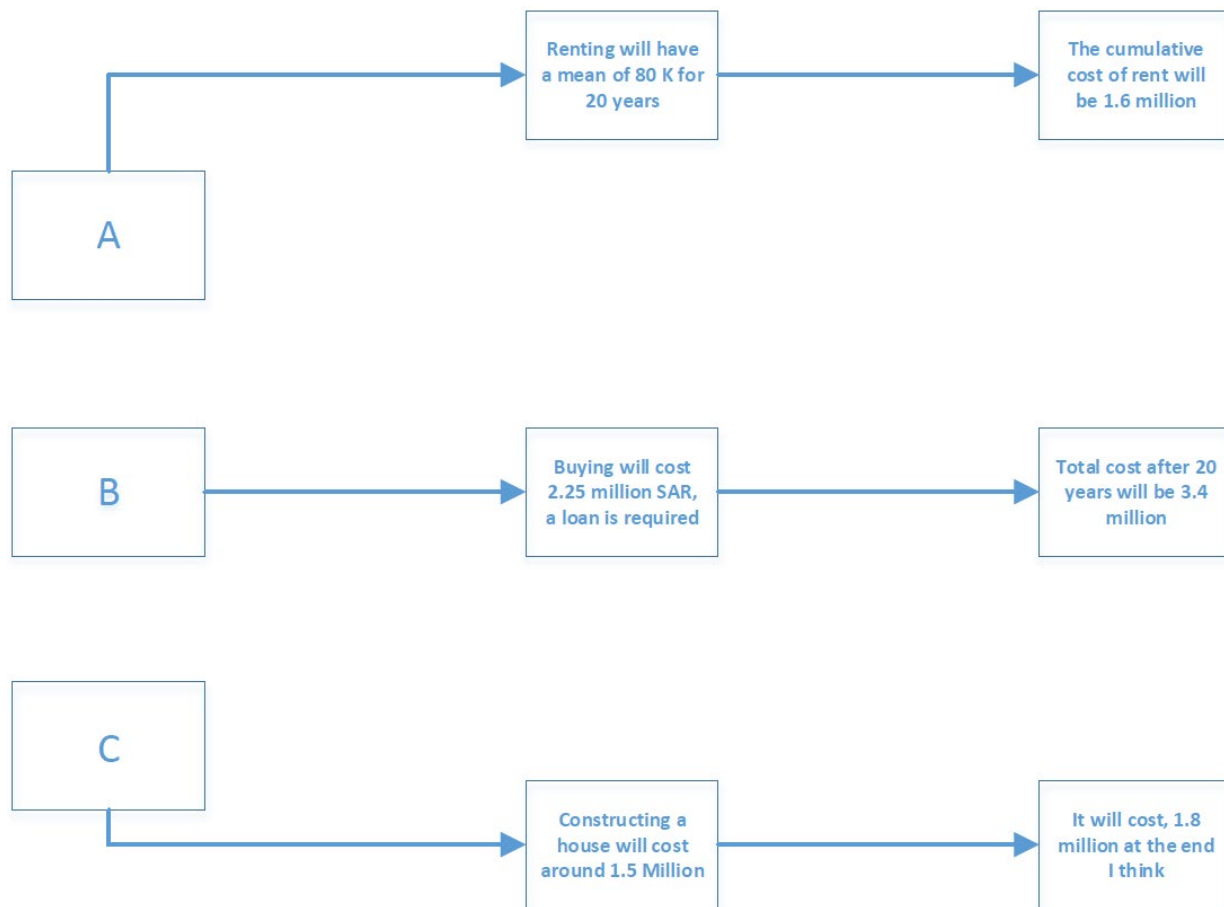
Risk ID	P	I	Contingency (SAR)	Control Measure
1	0.2	25,000	5,000	N/A
2	0.1	100,000	10,000	Place an Extinguisher
3	0.05	Not calculated	Not calculated	Wear PPE
4	0.15	2,000	300	Better contract negotiation
5	0.15	150,000	22,500	Not controllable
6	0.1	40,000	4,000	Latent defect
7	0.8	10,000	8,000	Make workers careful to prevent costly cleaning
8	0.3	5,000	1,500	Place a door and lock on one room
9	0.1	5,000	500	N/A
10	0.3	30,000	9,000	Better time management
Total		417,000 SAR	60,800 SAR	Contingency reserve

Table 1: represent the details of risks associated with constructing a house.

If building will be the choice, all of the risks above will be taken under consideration.

II- EMV of building, renting and buying:

A study of the market must be applied, after studying the renting of properties (option A) for 20 years. The buying of the house that fits my requirements will require a loan (option B), with (option C) is constructing a house, next is the EMV drawing of all options in DWG 1, a probability of 1.0 is assumes for every option:



DWG 1: represent the EMV.

C. Conclusion:

From the numbers shown in DWG 1, the renting choice (A) is cheaper, but in theory will have paid 1.6 million and that money will be spent. Option B, will have in my option a high cost compared to option C which I think is the best, as I think paying maybe equal or a bit more is better especially when we do not know what the future holds, at least you will end up with an owned house with low interest as the government will cover most of the interest for that option.

References:

- 1) *A STUDY ON RISK ASSESSMENT USING PROBABILITY-IMPACT MATRIX METHOD FOR A MULTI-STOREYED RESIDENTIAL BUILDING* by Rajat Pyati.
- 2) *Brainstorming, influence, and icebergs [project management]* by B. Colwell
- 3) *Risk Management: The Undiscovered Dimension of Project Management* by Paul S. Royer.
- 4) *Intelligent Risk Prediction of Storage Tank Leakage Using an Ishikawa Diagram with Probability and Impact Analysis* by Favour Ikwan, David Sanders, Malik Haddad, Favour Ikwan, David Sanders and Malik Haddad.