**Real options evaluation for developing premium beers in Costa Rica**

**A real options approach can be used to evaluate proposed projects with multiple options.**

A brewer of premium beers had been exporting its products to Costa Rica for many years. They were considering an investment in brewing capacity in Costa Rica. Although it was envisaged that, initially, this would take the form of brewing standard products locally and distributing through existing distributors, there were other ideas being discussed, though these were all contingent on the building of the brewery. Management took a real options approach to evaluating the project as set out in the diagram below. The evaluation of the proposal to build the brewery considered three options; to invest now, at a later date, or not invest at all. However, the building of the brewery opened other options. One of these was to cease operating through existing third party distributors and open up their own distribution network. Again, there were alternatives here. Should they invest in this immediately after the brewery was built, at a later date or not invest in it at all and continue through their current distributors? The investment in the brewery, especially if better distribution systems were to be developed, in turn opened up other options. Currently being discussed, for example, was whether there existed a market opportunity to develop and produce beers tailored more specifically to the Costa Rican market. Again, should there be investment in this soon after the building of the brewery, at a later date, or not at all? It was also recognised that other options might emerge if the project went forward. The board used a real options approach, not least because they needed to factor in the potential added value of the options opened up by the brewery. They would employ (Discounted Cash Flow) DCF to evaluate the brewery project. However, they would also evaluate the other options assuming the brewery was built. In each of these evaluation exercises DCF would also be used, adjusting the cost of capital to the perceived risk of the options. This would give them an indication of Net Present Vale (NPV) for each of those options. The possible positive NPVs of the subsequent options could then be taken into account in assessing the attractiveness of the initial brewery project. They also recognised that, if they invested in the brewery so as to further develop their presence in Costa Rica, greater clarity on both costs and market opportunities would emerge as the project progressed. So it would make sense to revisit the evaluation of the other options at later stages as such information became available.

**Questions**

**1)What are the advantages of the real options approach to this evaluation over other approaches to: (a) to building the brewery (b) to other ideas being considered?**

Chart, line chart

Description automatically generated