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Thesis:

As a mechanical engineering student early in their career, there are not a lot of businesses that I can realistically start; given low initial capital[1] and my personal skill as in mechanical design, however, an engineering toy subscription box is a rare gem. Still, in the past, it would be much less viable to create subscription of low volume, high variation toys due to manufacturing cost and hassle, compared to simply curating and reselling items like cosmetics[2]; however, due to recent advances in rapid prototyping[3], both in price and ease of use, it has become possible for an engineering student to start this business. Parents of K12-and-under students can purchase this subscription to give their kids fun toys to play with, while also teaching them about engineering and inspiring them to pursue a STEM career path.

In this paper, we will look investigate the economics of starting an engineering toy, including net present value, rate of return, taxes, opportunity trade-offs, risks, and impacts of social and environmental on the economics. Similar businesses in other countries, like KiwiCo[4] or Green Kids Craft[5] in USA, can serve as a good indicator of parameters for evaluating this business plan, including price or cost.

[1] https://bench.co/blog/small-business-stories/subscription-box-business/
[2] https://www.mysubscriptionaddiction.com/best-subscription-boxes/best-beauty-boxes
[3] https://all3dp.com/2/history-of-3d-printing-when-was-3d-printing-invented/
[4] https://www.kiwico.com
[5] https://www.greenkidcrafts.com