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Abstract

The biotech sector is highly specialized, with long development time lines, high risk and high investment financing requirement, however with high returns. At a global scale, the USA and Europe are the most important markets, accounting for half of the global biotech patents. In 2012, the USA held 46.6% of the global sales in this sector with the European Union at 28.5%, Japan at 8.4% and BRICS at 3.4%. Much of the growth (29.3%) is however, expected in emerging markets. The South African government has invested an amount of approximately R1 billion in the period from 2003 to 2011 in the Biotechnology start-ups. It is not clear whether a return on this investment has been realized. Thus, the aim of this work is to investigate what is the investment performance of the South African Biotechnology industry, what funding models have been used and suggest models that would be appropriate for Biotechnology start-ups to result in an improved investment performance. The methods applied included reviewing various published journal articles, industry reports and lastly having structured expert interviews with major funders in the South African Biotechnology industry that is, the IDC, TIA, the dti and DST. The findings indicate that when compared to the development markets, the composition of the SA biotechnology sector lags behind in terms of the number of companies that are in existence, publically listed companies, revenue generated by companies in this sector and number of jobs created. It is evident that although government funding and percentage national GDP spend on R&D in this sector is on par with that of India and Brazil, the lack of private sector funding is much more pronounced in South Africa. In addition, the market size, industry revenues and profits generated in SA are much less than those of its emerging market counterparts. Furthermore, in addition to the financing environment that is not broad enough, there are critical structural elements such as the involvement of universities, alliances with large corporates and the role of the stock market in raising capital that need to be addressed. It is thus, suggested that the South African government reviews its current funding models in an effort to realize a return on its investments. Two models are proposed in this work. Firstly, government-private sector matching funds linked to an incubator and secondly, increasing the pool of funds by accessing patient capital and structuring it as VC –type fund. These models have been very successful in yielding returns in other markets and improving the impact of the sector.