
TMT: The Unit for Success



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How the right mix of experience and innovation generates a great start-up top management team.

Imagine someone gave you a million euros with only one condition: you invest it in a start-up. Two entrepreneurs show up at your door with the same idea for a revolutionary product. In both cases, the tech has exactly the same features but the founding teams are quite different. One team includes real scientific experts; the CEO has a PhD from MIT and years of experience. She's one of the leading thinkers in the field and is ready to commercialise her tech with others from her lab. The other founder is an internet entrepreneur with an interesting flair for fashion (let's say shorts and Crocs are his suit-up outfit). He has a team of serial founders, none of which are experts in this tech. He had a Web 2.0 start-up, which was bought out for an obscene amount of money. This founder definitely understands what entrepreneurship is about.

Would you give your cash to the scientist with the deep expertise or to the entrepreneur with a wide range of experiences?

To answer the question of whether depth or breadth of experience is more likely to ensure the success of a top management team – that is, a CEO and direct reports – I looked to data from the solar industry during its era of

ferment. In my forthcoming article **“Product Adaptation During New Industry Emergence: The Role of Start-up Team Pre-Entry Experience”**, I find the composition of top management teams (TMTs) made the difference when it came to major project adaptations and the firm’s success.

I examined data from 68 US start-ups in the solar industry from 1992 to 2007, just before the emergence of a dominant design. Of this sample, 9 were corporate spin-outs, 26 came from academia and 33 were independent entrepreneurs. I looked at their TMTs, including the breadth, depth and type of team members’ pre-entry experience. Breadth refers to the number of industries in which TMT members had experience before they joined the start-up. Depth was their experience in the solar industry. Type was whether the team members’ had experience as entrepreneurs or managers.

Adaptation is a major change that has repercussions in the R&D group and the production line – it’s not a question of changing a few lines of code or visuals in an app. In the pre-2007 solar industry, firms needed to make big decisions about which technology to work with – especially if the dominant technology could be based on market forces rather than the most effective type of product. The required adaptation could be very expensive.

The breadth of pre-entry experience shapes the likelihood of product adaptation and increases the possibility that the start-up adapts its products. The MIT-educated scientist from my opening scenario has a very valuable knowledge recipe, but in the hyperdynamic environment of start-ups, teams like hers may have a narrower capacity to track how an industry evolves. Someone with the technical know-how may excel at recognising and keeping up with what's happening in her immediate domain of expertise but not necessarily with the knowledge areas that influence the industry. She may be a little more blind to those aspects of business and there may be fewer opportunities for knowledge recombination in her team because of its shared knowledge paradigm. My research shows that the depth of experience in the solar industry actually decreased the likelihood of product adaptation. Expertise may create a form of inertia that limits possibilities.

A start-up needs to be able to adapt to all kinds of changes, including major ones. Entrepreneurs who are too fixated on a single design idea or type of implementation are less likely to flourish. In my research, I found that greater experience breadth in the TMT increases the likelihood of product adaptation by 72 percent. Greater experience depth, on the other hand,

decreases the likelihood of product adaptation by 81 percent.

A nascent industry

The pre-entry experience of the top management team tends to affect its initial strategic choices. This experience also tends to affect the ability to access complimentary assets, other resources (including the acquisition of talent) required to succeed in the industry. It tends to affect the evolution of the team itself and the eventual survival of the firm.

A **diverse** group is more likely to learn. Equipped with a learning mindset, it is more likely to adapt and therefore succeed. Rather than focus only on start-up founders, we also need to value the entire management team.

Dynamic capability and cognitive flexibility allow teams to revise their ideas about products and the marketplace, helping them find new paths in a shifting environment.

After an industry shake-out, most firms leave the field and only a few survivors are left. Options for survival include acquisition or repositioning into another industry. When looking at these “success” options – **survive, acquire and reposition** – the ability to adapt seems to predict the likelihood of some measure of success.

Knowledge portfolios

What’s the take-away? It is not that expertise is bad. Expertise can be valuable. But in a dynamic and changing world, knowledge portfolios are better. Being able to draw on multiple knowledge areas can help a start-up team to adapt quickly to a changing world. In the context studied, great entrepreneurs in the supposedly narrow solar industry drew upon knowledge from many diverse domains, including electronics, semiconductors, glass and other unexpected industries like newspapers or even **potato chip bag packaging**. Adaptation may include borrowing those kind of technologies and bringing them into the industry as with other types of start-ups. With a greater breadth of experience, the TMT can better recognise the value of advances coming from different angles. This breadth of experience may increase its opportunities to re-combine knowledge because the varied backgrounds of its members allow for different viewpoints.

This ability to pull things together, integrate them and create new products and services is influenced by the skills at the top. A team with people who have worked in multiple industries is more likely to have integrative

knowledge and a broader network from which to source the necessary complementary capabilities. Using established connections, teams can draw more broadly and find the people they need to draw on varied talents and capabilities.

In sum, it is critical for entrepreneurs to develop the cognitive flexibility to adapt to new and changing environments. Much of this cognitive flexibility seems to be related to broad experience in prior industries as well as learned experience. For those who may not have such experience, there is still great hope of success. Being aware of the need to change and being open to it may be the most important quality of all.

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