

# Support start-ups by older PMETs

More can be done to help them become the source, rather than recipients, of job creation

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As Singapore's economy matures, the challenge of creating high-value-adding jobs for the growing professional, managerial, executive and technician (PMET) workforce has received increasing policy attention.

Between 2008 and 2018, the supply of PMETs has increased with the share of Singapore's labour force, with tertiary education qualification rising from 42.6 per cent to 56.2 per cent.

The dramatic adverse impact of Covid-19 on the economy in general, and on specific PMET-intensive sectors such as transport and hospitality services in particular, has further heightened awareness of the urgency of the challenge in recent months.

To help existing businesses sustain their current PMET jobs and to provide new ones, especially for older PMETs who may be most at risk, a wide range of policy interventions has been introduced by the Government, and additional ones are being debated in Parliament.

But there is an area that deserves greater policy attention: how to encourage older PMETs to become start-up entrepreneurs – making them the source, rather than the recipients, of job creation.

The popular belief is that start-ups, especially technology-based ones, are founded mainly by young entrepreneurs, with images of Bill Gates and Mark Zuckerberg coming readily to mind.

This is more a myth than reality: A sizeable number of new business start-ups are actually founded by older PMETs (those 40 years and above) and that on average, they are more likely to do better in job creation than young entrepreneurs.

In a recent study covering 2.7 million business start-ups between 2007 and 2014 in the United States, Professor Pierre Azoulay at the Massachusetts Institute of Technology and Dr Javier Miranda at the United States Census Bureau found the average age of people who founded any business that hired at least one employee to be 42.

Among entrepreneurs who founded start-ups that are likely to be tech-based or innovation-intensive – as measured by one of several indicators such as owning a patent, receiving venture capital investment, or operating in an industry that employs a high



Many older PMETs can act as early angel investors or advisers, or take up interim senior management roles in start-ups led by younger entrepreneurs who have the drive and tech-savviness but lack business experience, industry-specific domain knowledge or connections, say the writers. ST FILE PHOTO

fraction of Stem (science, technology, engineering and mathematics)-educated persons – the average age of founding turns out to be similar.

Interestingly, looking at only the 0.1 per cent of start-ups that had grown the fastest in terms of employment in the first five years, the average age of founders is even higher, at 45.

The study also shows that having the relevant experience matters: Those entrepreneurs who had started their businesses in the same industry they had worked in before grew, on average, more than twice as fast as those without prior background in their chosen industry.

#### MEAN AGE FOR START-UPS

Our own research on start-ups in Singapore tells a similar story. Drawing on data from the annual Global Entrepreneurship Monitor (GEM) surveys for the most recent three years (2012 to 2014) where we have data on Singapore, the mean age of Singaporean adults who were engaged in start-up activities at the time of the survey was over 39, just a little bit lower than in the US study.

The GEM surveys covered new business formation in general. To look at the subset of tech start-ups, including mobile/Internet/e-commerce-related start-ups, we conducted a survey in 2016 covering 530 such start-ups.

The mean age of entrepreneurs at the time they founded their

start-ups was estimated to be 35.3, somewhat younger than entrepreneurs in general. However, if we look at only the subset of technology-intensive start-ups that either owned one or more patents, or were in “deep-tech” sectors, the mean age goes up to over 39.

We also replicated the regression analysis by the US study using our Singapore sample and found that the age of founders at the time of founding is significantly correlated with the start-ups’ three-year employment growth performance, as in the US study.

Moreover, having prior work experience in the private sector has a positive impact on the employment growth performance of the firm.

It is important to note that the significant participation of older PMETs (40 years or above) in new business start-ups has occurred in the last 10 years, even though most government policy attention in the same period has focused more on promoting, and supporting, young entrepreneurs.

In particular, tertiary students and recent graduates in Singapore have benefited enormously from government support for various entrepreneurship education programmes and incubation services for start-ups.

Although not intended as such, government venture investment co-funding programmes such as the Technology Incubation Scheme had been used mainly by the recipient

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venture capital funds to invest in Internet/mobile-related start-ups. These start-ups were primarily started by young entrepreneurs.

It is true that government agencies such as the National Research Foundation (NRF), Agency for Science, Technology and Research and universities themselves have sought to encourage deep-tech spin-offs to commercialise research coming out of publicly funded research, and such spin-offs could arguably involve the engagement of professors and research scientists who are older.

#### RESEARCH MATCHED WITH EXPERIENCE

However, experience worldwide has shown that few academic researchers make good entrepreneurs, and that a more likely route to successful university/public research

institute spin-offs is to get experienced/seasoned PMETs from industry to take up the start-up execution role.

However, this “matching” of industry expertise with research scientists does not occur easily and needs to be actively promoted through policy intervention.

Our own experience in promoting this, through the Lean Launchpad Programme (LLP) that we initiated with funding support of the Ministry of Education and subsequently NRF, has shown promising results.

One example is Kosmode Health, a company co-founded in November 2016 by Associate Professor Huang Dejian, a chemist and food scientist from the National University of Singapore, and Ms Florence Leong, a former pharmaceutical executive.

The pair were connected in 2015 through LLP, and the mentor-mentee relationship grew into an entrepreneurial partnership, with both investing in a Singapore company that upcycles food processing by-products for human nutrition and biomedical applications.

Their complementary skill sets – Prof Huang’s core plant extraction expertise and Ms Leong’s operations and business strategy experience – culminated in Kosmode Health developing, among other things, starchless noodles with protein and fibre for individuals with high blood sugar and weight issues.

#### POLICY INTERVENTION

A key advantage for older PMETs in starting new businesses is their deep industry domain knowledge and network connections.

However, many of them often face a challenge in raising venture capital funding if they operate in highly specialised industries such as oil bunkering services that few venture capitalists have the domain expertise to understand, or if the market niche they are targeting is too small to fit the venture capital funding model.

Policy intervention is thus necessary to address such funding gaps.

The recent effort by the Maritime and Port Authority of Singapore and Enterprise Singapore, in which venture investors will inject a combined \$50 million in maritime technology start-ups, is a step in the right direction, but more can be done.

The engagement of older PMETs in start-ups encompasses more than taking on the lead entrepreneurial role. Few solo-founded start-ups succeed; most are team efforts.

Many older PMETs can act as early angel investors or advisers, or take up interim senior management roles in start-ups led by younger entrepreneurs who have the drive and tech-savviness but lack business experience, industry-specific domain knowledge or connections.

Such inter-generational matching, however, does not happen easily as it requires the right chemistry and mutual trust, which are often developed only after a process of mutual learning, adaptation of work culture and role expectations on both sides.

While a lot of the Government’s current skills development policy focus has been on technical skills retraining of older PMETs, more attention needs to be paid to PMET training to foster mindset change, such as risk tolerance, and to develop interpersonal skills, such as coaching skills.

From a longer-term perspective, Singapore’s rapidly ageing society will result in significant growth in the pool of older PMETs, including many reaching the traditional retirement age, but who still have much to contribute productively.

This is provided the right engagement opportunities can be designed, such as stock option vesting, and effectively matched to their time preference, for example, taking on a part-time role.

More policy research and policy experimentation should be encouraged to promote productive engagement of older PMETs in start-up entrepreneurship.

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