Early Stage Start-Ups: Evidence from the Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE)

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Chapter 1: Early Stage Start-Ups: Evidence from the Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE)

Introduction

In this chapter, the picture of Australian small business is supplemented by using data from the Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE). This data tracks large numbers of on-going business start-ups over time. The Australian Centre of Entrepreneurship Research at Queensland University of Technology collected data in four annual waves. (Wave 1 to Wave 4) from 2007 to 2011. CAUSEE allows the analysis of entrepreneurial entrants at two stages of development, i.e. nascent and young firms. Nascent firms are defined as firms in the process of being created, but not yet established in the market, and young firms are defined as having been operational for up to four years. An analysis of nascent firms provides unique insights, as no other known Australian database captures and follows the development of business start-ups at the pre-operational stage. In addition, the project captured judgment over samples of high-potential start-ups.

Numbers and types of start-up attempts

Out of over 30 000 households successfully contacted at random, just over 1000 had a “next-birthday adult” identified as a founder of a nascent firm. A very similar number of founders of young firms were identified. Scaling this up to population-wide numbers, as a rough estimate, suggests that over half a million Australians are involved in early stage entrepreneurial activity at any point in time. This chapter presents some findings from the 625 nascent firms and 559 young firms that agreed to participate in a comprehensive interview.

The prevalence of nascent firm founders can be directly compared with a harmonised study in the United States (US)—the “PSED II”. This comparison suggests that the proportion of the population actively engaged in business creation is higher in the US (4.9 per cent) compared with about 3.4 per cent in Australia. Australian start-ups, however, compare well with their American counterparts on indicators of quality. In terms of quality, Australian founders are less likely to be motivated by necessity or lack of alternatives, more likely to be growth oriented, more likely to emphasise research and development, and more likely to be based on young and/or sophisticated technologies. Australian founders are also slightly more likely to have a university degree and to work in teams.

This does not exclude the possibility that the US is more likely to produce “high-end” start-ups headed for venture capital investment, stock market introduction, and spectacular growth. However, this is a very small category in numbers in any country. A random sample of start-up attempts, start-ups, or established small firms will be dominated by a “modest majority” entering mature industries, representing no or low levels of innovation, and having limited aspirations and/or potential for growth. This is certainly true for the CAUSEE sample, as analysis in this chapter will demonstrate.

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1. The project received significant funding from the Australian Research Council and Industry partners National Australia Bank and BDO. See Davidson, Steffens, and Gordon (2011) and/or http://www.qut.edu.au/research/research-projects/the-comprehensive-australian-study-of-entrepreneurial-emergence-causee for further details about the project and for current and future analyses of the data.

2. High potential firms are those ambitious growth focused firms formed by founders that possess high levels of human capital, based around innovative ideas and high technology. These firms are far rarer than the modest majority of start-up firms captured by any random sample, as is the case in the main CAUSEE sample. Hence, high potential firms would require extensive effort to locate using a random sampling procedure therefore a researcher controlled judgement sample was made using multiple sources to locate and recruit high potential survey participants.

This does not mean that in Australia opportunistic entrepreneurial activity compares poorly to realistic expectations or to other countries. On the contrary, the Global Entrepreneurship Monitor (GEM) suggests that Australia has high rates – second only to the US among “innovation-driven economies” – of both nascent and young firms. Further, Australia has the highest proportion of start-ups motivated by “improvement-driven opportunity”. Australian start-ups also compare reasonably well on orientation towards innovation and growth. The only quality indicator where Australian start-ups score comparatively low is on internationalisation.

Table 1 shows the geographical location of the CAUSEE start-ups. The geographical distribution of the sample is largely aligned with the distribution of the Australian population. That is, most of the start-ups originate from the more populous states. Further, half of the sample is located in the country’s five main agglomerations with the other half representing small to midsized towns and rural areas. There are no marked differences between nascent and young firms in these regards. The proportions found in NSW, Victoria and WA are somewhat lower than their corresponding proportion of the established small business population, while Queensland’s share is higher. This may well reflect real differences, but it is also possible that the fact that the study was undertaken by the Queensland University of Technology may have lead to higher response rates and therefore a somewhat inflated representation of respondents from Brisbane/Queensland.

Table 1: Location of start-ups

<table>
<thead>
<tr>
<th></th>
<th>Nascent Firm</th>
<th></th>
<th>Young Firm</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Australian cities vs. the rest of Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rest of Australia</td>
<td>302</td>
<td>48%</td>
<td>283</td>
<td>51%</td>
<td>585</td>
</tr>
<tr>
<td>Sydney</td>
<td>100</td>
<td>16%</td>
<td>69</td>
<td>12%</td>
<td>169</td>
</tr>
<tr>
<td>Melbourne</td>
<td>99</td>
<td>16%</td>
<td>82</td>
<td>15%</td>
<td>181</td>
</tr>
<tr>
<td>Brisbane</td>
<td>61</td>
<td>10%</td>
<td>70</td>
<td>13%</td>
<td>131</td>
</tr>
<tr>
<td>Adelaide</td>
<td>36</td>
<td>6%</td>
<td>28</td>
<td>5%</td>
<td>64</td>
</tr>
<tr>
<td>Perth</td>
<td>27</td>
<td>4%</td>
<td>27</td>
<td>5%</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>625</td>
<td>100%</td>
<td>559</td>
<td>100%</td>
<td>1184</td>
</tr>
</tbody>
</table>

| Australian states |                  |                  |            |                  |       |
|                  | No.          | %                | No.        | %                | No.   | %    |
| NSW              | 179          | 30%              | 150        | 28%              | 329   | 29%  |
| VIC              | 144          | 24%              | 121        | 22%              | 265   | 23%  |
| QLD              | 162          | 27%              | 158        | 29%              | 320   | 28%  |
| SA               | 46           | 8%               | 39         | 7%               | 85    | 7%   |
| WA               | 35           | 6%               | 43         | 8%               | 78    | 7%   |
| TAS              | 19           | 3%               | 13         | 2%               | 32    | 3%   |
| NT               | 4            | 1%               | 2          | 0%               | 6     | 1%   |
| ACT              | 14           | 2%               | 12         | 2%               | 26    | 2%   |
| Total            | 603          | 100%             | 538        | 100%             | 1141  | 100% |

Note: Totals are lower in the analysis by state because of missing information in some cases. Nascent Firm: have to report concrete (and continuing) actions towards starting a new business within the past 12 months, be a part owner of this business, and not yet having experienced a period where revenues exceeded costs for at least 6 of the past 12 months. Young Firm: have to be a part owner of this business, and have been operational for up to four years.

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4 See Kelley, Singer, and Herrington (2012). GEM assesses the prevalence of Nascent and Young firms like CAUSEE. GEM has the disadvantages of being based on a much smaller sample; collecting far less data about each firm, and not following them over time, but also the advantages of weighing the data very precisely to represent the population, and of providing comparison across a large number of countries.
The CAUSEE industry classification does not accord completely with the classification used in other places in this report. This is because nascent firms often do not have an official classification code yet – they have to be asked – and the industry categories used were dictated by harmonisation with a US counterpart study. Using the CAUSEE industry classification, the major groups of start-ups by industry are as follows: Retailing (13.6 per cent); Consumer services (12.5 per cent); Health, Education, and Social services (11.9 per cent); Business consulting/services (11.2 per cent); Construction (9.5 per cent); Manufacturing (6 per cent); Agriculture (5.3 per cent); Hospitality (hotels, restaurants, etc.) (4.1 per cent) and Communications (4.0 per cent). The remaining 22 per cent are found in miscellaneous, other industries.

**Survival, employment and growth**

It is frequently claimed that a very large share of all start-ups fail within the first few years. These claims are usually exaggerated. This is for two reasons: 1) some apparent “failures” occur in the data because on-going businesses are re-assigned to a new code due to changes in legal form, ownership, or main industry, and 2) even when firms are terminated (as independent entities) they may be sold at a profit or voluntarily closed without financial loss (e.g., due to retirement). With higher quality data, the picture typically looks less negative⁵.

On the other hand, studies usually do not capture terminations before the start-ups become operational businesses that are visible in statistical data bases. CAUSEE provides data on this issue. Figure 1 displays the outcome distributions for all CAUSEE participants that have known status 36 months after the initial interview (for part of the sample the outcome is unknown due to failure to respond in later waves of data collection; these are not included in the analysis).

![Figure 1: Cumulative firm outcomes](image)

Similar proportions of nascent firms have reached an operational state (31 per cent), i.e. sales regularly exceed costs, compared with those that have terminated (35 per cent), and those who are still trying to achieve venture creation (34 per cent). This outcome closely mirrors the outcomes in the US PSED study⁶. The results underscore that a large proportion of nascent firms terminate before

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⁵ See Levie, Don and Leleux (2011).

⁶ See Reynolds (2007).
becoming an operational firm. It also appears unlikely that more than 50 per cent will ever reach operational status.

The young firm sample shows that these new ventures remain more robust to firm closure. The vast majority of young firms (78 per cent) continue to be active in the market the last time they participated. The annual termination rate for young firms is 9 per cent at most, and 14 per cent cumulatively, while cumulatively only 8 per cent of young firms experience a drop-off in activity to be considered as having uncertain status.

The termination rate appears less dramatic when data from exit interviews are analysed. These interviews were conducted with all founders who had terminated. Around 76 per cent of young firms and 60 per cent of nascent firms reported no financial loss upon termination, while only 13 per cent of nascent and 6 per cent of young firm founders rated their experience as negative or very negative on exit. Termination without financial loss reflects the case where ventures have recouped their costs prior to their decision to exit. The modest nature of many start-ups means that limited costs may be incurred by those venture creation attempts that eventually terminate. A large majority rated their exit as a positive experience. Around 29 per cent would probably attempt a start-up again, while 53 per cent would definitely engage in a start-up in the future—if faced with the right opportunity.

In some respects, the labelling of a terminated venture as a failure depends on how this is framed. The decision to exit a venture should not be taken lightly and can carry the same importance as the decision to create a venture. For example, early termination of a venture which may go on to destroy value for the owner may well be considered a successful remediation, or at least the lesser of two evils. In any respect venture failure will invariably be referred to the perceptions of the owner that is involved. As a result failure exhibits more subjective than objective qualities. Given that the majority of firms that were terminated had their owners rate their experience as a positive one, this makes the ‘failure’ tag a hard one to pin on most exiting ventures.

Outcomes vary by type of firm. Product-based nascent firms, mainly retailers and manufacturers, are less likely to reach an operational state and more likely to terminate, compared with services firms, Figure 2. Comparing the last known outcome after 36 months (W4), the figures for “getting operational” are 25 per cent compared with 36 per cent. For termination they are 40 per cent compared with 31 per cent. Focusing only on industry rather than the type of market offering reveals some important differences in firm viability. Retailers have comparatively high figures for both getting operational and termination—suggesting low barriers to entry but high barriers to survival, while manufacturing start-ups have a low incidence of getting operational paired with high incidence of termination. Manufacturing firms therefore appear to be the type of start-up that is the hardest to get off the ground.
The CAUSEE random sample of nascent and young firms identifies that job creation beyond the founder-owners is the exception rather than the rule. Over the 36-months interview period, the most likely number of employees hired by any firm at any time, is zero. Figure 3 shows employment for both nascent and young firms at the time of first sampling (W1). Although there are occasional instances of firms taking off on a growth trajectory, the general pattern of this distribution for employee numbers changes little in subsequent years. Most new ventures therefore start off very small and stay that way. The average number of employees in nascent firms was one, while the average number of young firm employees increased from two to three from W1 to W4.
These results illustrate the “modest majority” character of a random sample. In line with this, a majority (approximately 75 per cent) said at the first interview that they prefer to build a “small and manageable” firm to pursuing maximum growth. Rather than triggering an acquired taste for growth, experiences over time make these preferences shift towards an even greater majority favouring “small and manageable”.

**Characteristics of new venture founders**

Like many other research studies, the CAUSEE data suggest that the diversity of founder characteristics is more pronounced than any identification of a “typical entrepreneur” profile based on traits or demographic description. The founders are spread across all age groups, and while their average age is high in international comparisons, it is lower than for the average Australian citizen. Immigrants are neither over- nor under-represented. Australian business founders also seem comparatively well equipped with human capital—many are university-educated, with different types of experience that may benefit the start-up. The data shows that a firm with increased education based human capital is more likely to create employment for others, and obtain higher levels of profit once established as a *young firm*. Yet, education does not increase the likelihood of a *nascent firm* becoming operational, nor increase the likelihood of firm survival. The influence of experience based human capital on venture success is more widespread than education based human capital. More than half of the start-ups have at least one founder who has been involved in business start-ups before. Increased industry experience improves a ventures chance of survival; it increases the likelihood of employment generation, and allows *young firms* to derive larger profits.

Almost exactly half of Australian business founders work in teams, albeit only a minority of these are professional teams assembled primarily for business purposes. Team-based start-ups have more human capital at their disposal, but this is not a clear cut relationship. The presence of very different types of teams means that a simple categorisation into team-based compared with solo ventures is not likely to explain much in terms of characteristics, progress and success of ventures. While the founders also use employees, unpaid helpers and a variety of external sources of knowledge to facilitate their start-ups, there are also indications that many founders do not draw sufficiently on social capital (network contacts) to counterbalance their own shortcomings. Less than half of all *nascent* and *young firms* are active in face to face business networks (29 per cent).

Overall Australian women are marginally under-represented as firm founders, and there are important gender differences regarding what type of firms are created. Female representation is particularly low in the construction industry, while manufacturing is also largely male-dominated. Conversely, retailing, health, education and social services are largely female-dominated industries.

Almost 90 per cent of respondents stated that they are driven by positive, *opportunity-driven* motivation. However, the instance of *necessity-motivation* is slightly higher for Australian female founders (14 per cent) than for males (9 per cent). A somewhat larger difference is evident between the preference for “maximum growth” compared with keeping the firm “small and manageable”: Twenty-seven per cent of male-only ventures go for maximum growth, compared to 13 per cent of female-only start-ups.

The male-female division, however, could be an oversimplification. Figure 4 classifies team start-ups into three gender categories: male only (solo or team); female only (solo or team) and mixed-gender team, with the latter third category constituting a considerable share of all start-ups. Most of the mixed-gender teams are spousal or *de facto* couples, with or without additional owners.

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8 Kelley et al. (2012); Reynolds & Davidsson (2009)
Exports and other international activities

It was noted above that in international comparison, relatively few Australian start-ups engage internationally, and relatively more founders favour the domestic market, due to their small scale, young age and distant location, particularly service-based firms. There is also a tendency for the perceived attractiveness of international markets to decrease over time.

A significant minority engages in international exchange, and over time this remained unchanged. Figure 5 shows that start-ups that internationalise tend to start doing so at very early stages, rather than going international after reaching a stable position in the domestic market. This is consistent with the ‘born global’ view rather than the traditional image of gradually developing internationalisation. However, there is some (but rather limited) growth in the proportion of international exchange over time among those start-ups that engage internationally at all. The mode of internationalisation also tends to develop from reliance on intermediaries towards more direct forms over time.

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9 See Oviatt and McDougall (2004).
Many start-ups that do not internationalise during the early development phase regard international sales as difficult and possibly unrealistic. It is also evident that international sales fail to reach the levels the founders’ have in mind at very early stages of the start-ups’ development and fewer become exporters (and export less) than they initially aim for. This is evident for firms in the high-potential sample, although these firms show considerably higher levels of planned and actual international sales. Immigrant founders as well as other founders with adult age international experience have more favourable perceptions of international markets and engage more in international activities, including imports and exports. However, among active exporters, the (average) proportion of sales that is currently generated overseas, or the proportion aimed for in the future, is not markedly different for immigrant founders compared to their Australian-born counterparts. Although over time the differences in the mode of exporting are accentuated. Specifically, over time immigrant founders increasingly favour more direct modes of export – either from Australia or via their own presence abroad – over exporting via domestic or foreign intermediaries.

**Business confidence and the global financial crisis**

The CAUSEE study did not measure traditional business confidence. However, some questions did shed some light on the founders’ level of confidence and how it develops over time. This is of particular interest since the data collection started the year before the Global Financial Crisis (GFC) and continued for a number of years following the crisis.

Australian business founders—like business founders elsewhere—were quite confident that their firms would survive. At the first interview, the mean (81 per cent) and median (90 per cent) of respondents expected that their firm would still be active in five years time. When asked about the prospects of firms other than their own, the confidence levels were much lower, with corresponding survival expectations of the mean at 39 per cent and the median at 40 per cent. These estimates did not change much over time.

Other indicators, however, have declined over time. The average self-assessed level of novelty and strategic advantage of the firm, the perceived attractiveness of international markets and the growth-orientation of the firms are reduced over time. W2 was undertaken during July 2008 to June 2009, and the decline from W1 to W2 could be ascribed to the GFC. However, there was no upward
trend for these indicators in W3 and W4, when the outlook for the Australian economy had improved. Therefore, these downward trends could have reflected increasing realism that would show in any sample of early stage ventures at any time, due to learning from early interaction with potential customers and other stakeholders.\(^{10}\)

On questions in W3, almost a quarter (24 per cent) of the founders who were still active and participating in the survey reported that they had changed some aspect of their business in response to the GFC. The most common claims related to lower future investments (10.4 per cent), lower production levels (8.6 per cent), or lower staff than previously expected (8 per cent).

The CAUSEE data also allow for a less obtrusive and therefore, arguably, more credible way of assessing the effect of the GFC on ongoing start-ups. A range of indicators suggest that the onset of the GFC started in earnest with the collapse of Lehman Bros. in mid-September, 2008. About half the CAUSEE sample was re-interviewed during W2—before and after this point in time, allowing comparisons of responses to the same questions in W1 and W2. The analysis suggests that the immediate effects of the GFC were small or non-existent\(^{11}\). This could therefore be interpreted that the large majority of nascent firms were more affected by their immediate environment than by the fluctuations in the overall economy. Other research has demonstrated that events like the GFC can lead to lower entry rates, which also seems to be the case for Australia\(^{12}\). The CAUSEE findings suggest that this could be ascribed to potential founders refraining from initiating a start-up attempt during the GFC rather than the termination of on-going start-ups efforts.

\section*{Finance}

Table 2 presents data on the use of various sources of funding for the start-ups at the time of the first interview (W1)\(^{13}\). While the use may change over time, the important, general patterns are revealed in this analysis. The question to nascent and young firm was phrased slightly differently and the results should therefore be interpreted with care.

What is most striking about the data in Table 19 is the limited use of many sources. Only one source—personal savings—is used by more than 50 per cent of all start-ups. Despite frequent references to the ‘3 Fs’ – friends, family and fools – most firms do not rely on such sources. Apart from credit card debt, even a major source such as bank funding is used only by a minority.

In a random sample, funding by business angels and venture capital firms is close to non-existent. This is quite different from the picture of “typical” start-ups from the business press or business school textbooks. The similarity in the patterns for nascent and young firms also suggests that there is usually no radical change in the funding pattern from inception through early life.

This again underscores the modest nature of the majority of start-ups. However, this is not the only reason. Just over half the firms are started by individuals or teams who have previous experience from starting businesses, and some of these may have accumulated sufficient resources to fund the early stages even of a somewhat more ambitious start-up. Further, doing much with seemingly little, and letting revenue from the market fund the development of the business, are hallmarks of skilled entrepreneurs\(^{14}\).

\(^{10}\) See Davidsson, James, Salunke and Tonelli (2010).
\(^{11}\) See Davidsson and Gordon (2012).
\(^{13}\) This analysis was previously published in Davidsson et al. (2011).
\(^{14}\) See Winborg and Landström (2001), Baker and Nelson (2005), Sarasvathy (2001)
Table 2: Per cent of nascent and young firms using different sources of funding

<table>
<thead>
<tr>
<th>Source</th>
<th>Not used</th>
<th>Minor source</th>
<th>Major source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NF</td>
<td>YF</td>
<td>NF</td>
</tr>
<tr>
<td>Personal savings</td>
<td>13</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Personal credit card</td>
<td>55</td>
<td>53</td>
<td>25</td>
</tr>
<tr>
<td>Money from another business that the founders’ also own</td>
<td>85</td>
<td>96</td>
<td>6</td>
</tr>
<tr>
<td>Government grants</td>
<td>93</td>
<td>94</td>
<td>5</td>
</tr>
<tr>
<td>Delayed payment terms from suppliers</td>
<td>87</td>
<td>78</td>
<td>8</td>
</tr>
<tr>
<td>Advance payment from customers</td>
<td>86</td>
<td>78</td>
<td>9</td>
</tr>
<tr>
<td>Loans from family members</td>
<td>86</td>
<td>91</td>
<td>9</td>
</tr>
<tr>
<td>Loans from friends, employers or colleagues</td>
<td>95</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>Founders’ personal secured-bank loans</td>
<td>83</td>
<td>84</td>
<td>4</td>
</tr>
<tr>
<td>Founders’ other personal loans, overdraft or other credit facilities from a bank</td>
<td>85</td>
<td>84</td>
<td>9</td>
</tr>
<tr>
<td>Secured bank loans to the business itself</td>
<td>92</td>
<td>91</td>
<td>3</td>
</tr>
<tr>
<td>Other loans, overdraft or other credit facilities from a bank to the business itself</td>
<td>94</td>
<td>92</td>
<td>5</td>
</tr>
<tr>
<td>Loans from any other organisation to the business itself</td>
<td>96</td>
<td>94</td>
<td>3</td>
</tr>
<tr>
<td>Equity from family members</td>
<td>95</td>
<td>91</td>
<td>4</td>
</tr>
<tr>
<td>Equity from friends, employers or colleagues</td>
<td>98</td>
<td>99</td>
<td>1</td>
</tr>
<tr>
<td>Equity from other private investors (‘business angels’)</td>
<td>98</td>
<td>99</td>
<td>1</td>
</tr>
<tr>
<td>Equity from Venture Capital firms or any other organisations</td>
<td>100</td>
<td>100</td>
<td>(one case each among NF and YF, respectively)</td>
</tr>
</tbody>
</table>

Note: NF = Nascent firm; YF = Young firm. Entries in per cent. Entries may not sum to 100 vertically due to rounding error. “Major” was defined as representing at least 20 per cent of total funding needs.

Figure 6 is based on a different set of questions, which was only put to the nascent firm category. This analysis accumulates the information received across all four waves of data collection. The results restate that a minority—around 25 per cent—seek external funding. CAUSEE does not explore reasons for not seeking funding. Among those who seek external funding, over 40 per cent have not received the funding within the time frame of their participation in the CAUSEE study. This signals that for a minority of around 10 per cent of all start-ups that seek external funding, this maybe an issue.
Supplementary analyses also show that a higher incidence of seeking external funding is evident among nascent firms that were started by teams (33 per cent), are product-based (29 per cent), or considered ‘high technology’ firms (30 per cent). However these characteristics do not seem to increase the likelihood of receiving external funding among those who seek it.

Another indication of early stage financing challenges can be derived from questions about the education- and experience-based knowledge of the founders and others involved in the start-up. Five areas were investigated: sales, marketing or customer service; finance or accounting; administration or human resource management; industry-specific product/service development knowledge, and industry-specific production or service-distribution knowledge. The lowest reported knowledge applied to finance or accounting. The data therefore suggest that finance and accounting skills, if any, are the primary areas of skills shortages in founders.

Innovation and e-commerce

In each wave of CAUSEE data collection a series of questions were asked about the level of novelty, or degree of innovation in terms of a) the product or service offered; b) the method for producing or sourcing the product/service; c) the approach to promoting and selling the product/service, and d) novelty in terms of the selection of customers or markets to target. The response scales essentially stretched from “pure imitation” to “new to the World”.

Founders appear most likely to claim introducing novelty in terms of product/service offering (a) and in market selection (d). More than 70 per cent and 55 per cent, respectively, claim some level of novelty on these dimensions; 30 per cent reported they introduced a high degree of novelty in their product or service. The level of innovation is lesser for the other dimensions (b and c) with about 70 per cent admitting “pure imitation”.

Combining all four types of novelty into an overall score, higher levels of innovation were found in manufacturing, retailing and consumer services oriented industries, with construction and agriculture scoring particularly low. Firms started by founders with previous start-up experience are
also likely to be more innovative than those started by teams (other than spouse teams). No apparent relationship between the level of education and innovativeness was evident.

Figure 7 adds that nascent firms claim a higher level of novelty than young firms. The sharper downward slope for nascent firms suggest this could in part be due to an initial over-estimation of the own firm’s level of novelty. The difference in W3 can be ascribed to the phenomenon that innovative firms are more difficult to get off the ground\(^\text{15}\). Therefore the sub-group of nascent firms that eventually are established need not be any more innovative than young firms.

**Figure 7: Estimated total novelty of nascent and young firms over time.**

![Total Novelty over Time (NF vs YF)](image)

Note: due to research methodology, data was collected between W1-W3.

The CAUSEE data also include some other innovation indicators. These reflect whether—according to the founder-respondent—the firm can be considered high-tech, has a strong focus on R&D, has developed any proprietary technology, and/or has any form of intellectual property protection (IP). The results for these indicators provide insights on group differences and developments over time. There is some variation across industries: a high proportion of manufacturing start-ups and business consulting firms identify themselves as high-tech. Australian start-ups compare well with a US study on the high-tech and R&D focus indicators\(^\text{16}\).

Figure 8 displays the proportion of sales that early-stage nascent firms generate online, or expect to generate online. There is a clear difference between product- and service-based firms: the former are more likely to sell and to generate a higher proportion of their sales online. It is also not evident that online sales are the dominant mode of transactions among new firms, with a majority not recording or expecting internet sales. Though earlier stage firms are more likely to consider online sales.

\(^{15}\) See Semasinghe (2011).

\(^{16}\) See Davidsson et al. (2011).
Nascent firms’ greater expected use of the Internet is evident in a number of questions. In Wave 1, 32 per cent of young firms, but only half as many nascent firms rated having a website for the firm as “not relevant to this business”. By Wave 4, a majority of nascent firms has a functioning website. Also at Wave 1, 21 per cent of nascent firm founders reported that Internet networks or communities are a major source of business information and advice. This is higher than all other sources, apart from family, other close acquaintances, and (potential) customers.

The difference between nascent and young firms in this regard widens over time. Likewise, at Wave 1, 21 per cent of nascent firm founders say they have joined a virtual network or community for the specific purpose of furthering their start-up. Being able to mix with others in the same type of work or trade will assist a firm in surviving as well as helping a nascent firm establish itself. Joining an online business community in order to discuss the venture, seek advice and support from likeminded founders is similarly useful.

**Conclusion**

This chapter described the key findings from the CAUSEE study and provided insight into the business creation process in Australia. Although most Australian start-ups are of a modest nature, early-stage entrepreneurial activity compares well internationally. Australian start-ups, compare well with their American counterparts on indicators of quality. In terms of quality, Australian founders are less likely to be motivated by necessity or lack of alternatives and more likely to be motivated by opportunity. The CAUSEE study identifies the key characteristics of Australia start-up firm founders: large proportions of start-ups are founded by teams, by founders with previous start-up experience, without external funding, and without creating employment beyond the founders. Australian start-up founders are well equipped with human capital, they are often university educated and possess experience beneficial to the start-up venture. In terms of demographics immigrants are neither over-nor-under represented whilst women founders remain under represented by international standards. The experience and outcomes of start-up firms has also been examined in this chapter, with specific analysis on finance, innovation and international activities.
The CAUSEE study has further investigated the reasons behind start-up exits or terminations and investigates what happens when a business venture fails. A significant proportion of start-up attempts do not become operational firms and some close down after having been operational for some time. The majority of Australian start-ups tend to report their experience as positive and would engage in a start-up activity in the future. The study also revealed the funding sources that nascent and young firms use for their ventures. The data indicates that firms tend to use limited sources of finance, and tend to fund their ventures through personal sources of funding. This data underpins the assertion that Australian start-up founders possess strong entrepreneurial skills and fund the development of their business through market revenue.

It was noted that in international comparisons relatively few Australia start-ups engage internationally. This can be attributed in part to the young age, scale and distance of nascent and young firms about a fifth of start-ups generate some share of their sales internationally, and those that do, tend to start doing it from the beginning. These results are similar for firms that engage in importing activities. Whilst Australian start-ups have comparatively lower international sales prospects, the vast majority of start-ups offer some degree of innovation in respect to their business.

Australian start-up firms offer some degree of innovation in different aspects of their business. A significant proportion offer innovations – especially in the product offering and in target market selection – but innovativeness also introduces greater complexity and barriers to establishing the business. Finally, while brick-and-mortar businesses still dominate there are very clear signs towards increased and significant use of the internet for various business purposes among firms in the CAUSEE study.

This chapter provided insight on the some of the key findings and analysis of nascent and young firms from the CAUSEE. This dataset offers unique insights into the development of business start-ups at the pre-operational stage. For more information on CAUSEE, related research, or the Australian Centre for Entrepreneurship Research visit: http://www.bus.qut.edu.au/research/ace/
References


