Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE): Design, Data Collection and Descriptive Results

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Draft for submission to:
Handbook of Handbook on New Venture Creation Research
Kevin Hindle & Kim Klyver eds.

We gratefully acknowledge the significant financial support that made this study possible. The CAUSEE/FEDP research is funded by Australian Research Council grants DP0666616 and LP0776845 as well as contributions from industry partners BDO Kendalls and National Australia Bank, NAB.
Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE): Design, Data Collection and Sample Description

1 Introduction

The Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE)\(^1\) is a research program that aims to uncover the factors that initiate, hinder and facilitate the process of emergence of new economic activities and organisations. It is widely acknowledged that entrepreneurship is one of the most important forces shaping changes in a country’s economic landscape (Baumol, 1968; Birch, 1979; Acs 1999). An understanding of the process by which new economic activity and business entities emerge is vital (Gartner, 1993; Sarasvathy, 2001). An important development in the study of ‘nascent entrepreneurs’ and ‘firms in gestation’ was the Panel Study of Entrepreneurial Dynamics (PSED) (Gartner, Shaver, Carter, & Reynolds, 2004) and its extensions in Argentina, Canada, Greece, Netherlands, Norway and Sweden. Yet while PSED I is an important first step towards systematically studying new venture emergence, it represents just the beginning of a stream of nascent venture studies – most notably PSED II is currently being undertaken in the US (2005-2010; Reynolds & Curtin, 2008).

CAUSEE employs and extends the research approach of PSED and to some extent the Global Entrepreneurship Monitor (GEM) (e.g., Reynolds et al., 2005; Reynolds, Bygrave, & Autio, 2003). Essentially we identify individuals involved with a nascent firm from a screening interview of the adult population. We then conduct an extensive interview with them about their new venture annually over four years (2008-2011). While CAUSEE benefits greatly from the progress that has been made in previous research on nascent entrepreneurship and is partially harmonized with the on-going PSED II study in the US, it is much more than a mere replication study. The most important extensions to and/or departures from the PSED II are as follows:

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1. Since high growth firms are relatively rare in any random sample of new firms, we include an non-random over-sample of “high potential” firms;

2. We incorporate additional theory-driven content including packages related to effectuation, bricolage, the resource-based view, venture newness and venture relatedness;

3. We include an equally-sized sample of young firms that allows us to both compare progress of young firms with our nascent cohort over the same period and identical factor conditions and also combine the two samples to study some processes of entrepreneurial emergence over a longer time frame.

4. We select the venture as the primary unit of analysis, whereas PSED uses a mixture of new venture and individual;

5. We study entrepreneurial emergence within an Australian context.

The purpose of the current paper is to explain and rationalize the CAUSEE design and to present some preliminary, descriptive results from the first wave of the data collection.

2 Project Conceptualisation

One major aim of the research is to identify a statistically representative sample of on-going venture start-up efforts. These start-up efforts are subsequently followed over time through repeated waves of data collection so that insights can be gained also into process issues and determinants of outcomes. The overarching research approach was originally developed by Reynolds and collaborators for PSED and is a central development in entrepreneurship research for the following reasons:

1. The approach largely overcomes the under coverage of the smallest and youngest entities and the non-comparability across countries that typically signify available business data bases from statistical organizations. Avoiding under coverage and non-comparability allows for describing and comparing the prevalence of entrepreneurial activity in different economies. The more comprehensive studies of nascent entrepreneurship also overcome the lack of data on many interesting variables that restrict the usefulness of ‘secondary’ data sets.

2. The approach overcomes the selection bias resulting from including only start-up efforts that actually resulted in up-and-running businesses. This is achieved
by screening a very large, probabilistic sample of households in order to identify those individuals who are currently involved in an on-going start-up effort. The potential criticality of this is demonstrated by the fact that studying only those processes that result in successfully established firms is equivalent to exclusively investigating winners when studying gambling.  

3. The approach largely overcomes hindsight bias and memory decay resulting from asking survey questions about the start-up process retrospectively, and gets the temporal order of assessment right for causal analysis.

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Figure 1 provides an overview of the main components of the CAUSEE study and the relationships between these key elements. CAUSEE adopts a process view of new venture creation, whereas processes are central in the research model. Important antecedents are the nature of the venture idea itself, the resources that the founder(s) bring to the venture (including their own human and social capital) and the business/market environment. Indeed, it is not only these three elements separately, but aspects of their fit that is considered important (Davidsson, 2005b). Finally, the project examines many types of outcomes including progress, survival and financial measures.

Several outcomes exemplify the relative success of this research approach. First, the PSED has triggered a well funded follower in the on-going PSED II study (Reynolds & Curtin, 2008) as well as counterpart studies in a number of countries including Canada (Menzies, Gasse et al. 2002); the Netherlands (Van Gelderen, Thurik, & Bosma, 2005); Norway (Alsos and Kolvereid 1998), and Sweden. This has – apart from all other forms of dissemination – resulted in at least 70 articles published in peer reviewed journals (Davidsson & Gordon, 2009) including the best

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2 From such a study one would, among other things, conclude that a) gambling is profitable (for the gamblers); b) the more you bet, the more you win; and c) the higher risks you take (i.e., the more unlikely winners you pick), the more you win. While true for winners these conclusions are, of course, blatantly false for the population of gamblers (cf. the population of start-up attempts) (Davidsson, 2004).
cited papers since year 2000 in the leading European (Delmar and Davidsson 2000) as well as the leading North American (Davidsson and Honig 2003) journals in entrepreneurship. The Global Entrepreneurship Monitor has led to two special issues of the Small Business Economics journal (in 2005 and 2007) and is without doubt the most influential policy research project by far in the area of new and small business. As a case in point, at the time of this writing a Google search for “Global Entrepreneurship Monitor” yields 93,700 hits; even higher than another very well-known international research program, the “World Values Survey” which stops at 92,400. Davidsson (2006) and Davidsson and Gordon (2009) provide reviews of previous academic research based on PSED, GEM and related studies, while Reynolds (2007) provides an overview of results of the original PSED study conducted in the US.

3 What Distinguishes CAUSEE from its Forerunners?

While benefitting greatly from the progress that has been made in previous research on nascent entrepreneurship (Davidsson, 2006; Davidsson & Gordon, 2009) CAUSEE has several unique features. CAUSEE has been designed as a venture level study. This means that the interviewee is regarded a resource and informant for the venture. The characteristics and contributions of other founders (when present) are as important as the respondent’s, and when the respondent no longer works on the start-up it is still a valid case as long as somebody else does.

PSED and related studies have been somewhat limited in terms of the theoretical underpinning and measurement scales incorporated into the survey design (Davidsson, 2006). This is largely due to the very large size of the team that was involved in its development (Davidsson 2005a) and to the – essentially sound – ambition to give a realistic overview of the many factors involved in the process of starting different kinds of businesses (cf. Reynolds, 2007). As a consequence of trying to represent many complex matters with relatively simple measures that can serve as proxies at best. In response, CAUSEE, while still comprehensive, aims at covering fewer aspects in a more theory-driven fashion and with more carefully developed and validated operationalisations of theoretical constructs.

One of the great strengths of the PSED approach is that it allows – for the first time – the study of representative samples of emerging firms. This is a prerequisite for
statistical generalisations and for developing an understanding of what type of ventures make up the empirical population of business start-ups. However, the sampling approach has limitations for other purposes. A random sample of business start-ups is dominated by relatively modest, ‘me-too’ start-ups in mature industries. While this category of firm should not be dismissed as unimportant (Davidsson, Lindmark and Olofsson, 1998) there is the risk that the sample will not generate a sufficiently large (i.e., statistically analysable) group of high-tech, high-growth and/or high-potential firms, i.e., the type of firms that according to some studies generate almost all the effect of start-ups on job creation and economic development (Birch, Haggerty and Parsons, 1995; Wong, Ho and Autio, 2005). Generating a sufficiently large sample of high-potential firms via random contacts with households would be exceedingly expensive. As a second best, CAUSEE makes a comprehensive effort to obtain theoretically valid representation of high potential nascent- and young firms. We do this via contacts with a very large number of organisations that are likely to be in contact with such ventures. This will allow analysis of the special features of this category in comparison with that of a random sample of start-ups. The strategy and process behind this sampling effort will be reported in a paper accepted for the 2008 BCERC (Babson) conference (Senyard, Davidsson and Steffens, 2008).

Another unique feature of CAUSEE relative to previous studies within the PSED paradigm is that it includes not only the sample(s) of nascent firms, but also an equally sized sample of young firms, i.e., firms which have been operational and trading for three years or less. The inclusion of the ‘young firms’ sample has several advantages. First, it gives leverage to the significant investment needed to identify the nascent sample. Thus, the generation of the ‘young firms’ sample comes at almost no extra cost (the repeated interviewing of them, however, is costly). Second, the two samples in combination will provide a picture of entrepreneurial emergence over a longer time horizon. The processes involved in the development of young firms are both theoretically and empirically different from the transition of nascent firms into actual firms (Gartner, Shaver et al. 2004; Davidsson 2006). Consequently, inclusion of the young firms allows us to investigate important economic issues, such as growth and internationalisation, which could not be effectively investigated among nascents since most of them will not show much growth or internationalisation within the four-year time span of the study. Third, the inclusion of both groups allows quasi-
longitudinal comparisons at early stages of the project, before longitudinal data on the nascent firms’ development has been obtained. Fourth, the nascent sample will allow appropriate corrections for survival bias that would not be possible if the young firms sample was studied alone.

Another distinguishing factor is, obviously, that CAUSEE builds on Australian empirics. The Australian participation in GEM has suggested that Australia’s level of entrepreneurial activity – measured in this way – stands up relatively well in international comparison and that at any given point in time more than 1.2 million adult Australians are either (part-)owners of a recently started business or actively involved in an on-going business start-up (Hindle and O’Conner 2006). However, the GEM surveys only give rudimentary information about the characteristics and goals of these ventures (although we know they are modest in a majority of cases), and their development is not followed over time. Hence, little information is gained about what leads to successful completion of a start-up process.

In sum, CAUSEE represents a clear ‘first’ in Australia and has a number of unique design features also in relation to its closest international counterparts or predecessors. The most important of these are a) a clear focus on the venture level of analysis; b) emphasis on theory-testing and high quality in operationalisations; c) inclusion of a sample of ‘young firms’ alongside the on-going start-ups (‘nascent firms’), and d) addition of a judgment based over sample of ‘high potential firms’ in both categories. These unique features strengthen CAUSEE’s potential for contributions to scholarship and practice.

4 Main contents and foci of the CAUSEE research

Figure 1 above provides a graphical overview of the core concepts and relationships investigated in the CAUSEE research. Table 1 lists the main sections of the Wave I questionnaire that follow after successful screening (cf. above). The table also indicates the degree of harmonization with the PSED II study. Together Figure 1 and Table 1 provide a good overview of the main contents of the research.

Conspicuous in its absence in Figure 1 is a box labelled ‘The Individual’. This is because of the venture level perspective that CAUSEE employs. The characteristics of the founder may only be part of the human social capital at the venture’s disposal,
and these are seen as resources just as are financial and other resources that are also captured by the questionnaire contents. Hence, it is the Resources concept that deserves a separate box in the figure, mirrored by the ‘Team Resources’ and ‘Sources of Funding and Advice’ sections in the questionnaire. Important theoretical sources for this section is the Resource-based view of the firm (Barney 1991) and recent theorising about bricolage, i.e., the use of frugal and creative tactics for acquiring and combining resources, often for new use (Baker & Nelson, 2005). Hence, the questionnaire contains separate sections covering these issues. Some early findings on resource assessment are reported in Steffens, Davidsson & Gordon (2008).

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INSERT TABLE 1 ABOUT HERE

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It has recently been observed that entrepreneurship research has hitherto paid too little attention to characteristics of the venture idea (often referred to as ‘the opportunity’, see Shane & Venkataraman, 2000). In response, the CAUSEE research will thoroughly investigate the newness and relatedness of the venture idea (cf. Dissanayake, Gordon & Davidsson, 2008) as well as how it changes over time (cf. Davidsson, Hunter, & Klofsten, 2006). Consequently these areas are covered in separate sections of the questionnaire. Basic classifications of the type of venture idea along different dimensions are also made in the section ‘Classifying the Venture’.

The Environment is not given much room in the questionnaires but enters the research via knowledge of what industry and region (type) the ventures belong to. Non-survey data about the characteristics of regions and industries can be added to the data set.

As regards process a very important part of the survey is the time-stamped gestation activities that we investigate. This has been one of the most fruitful parts of previous studies of nascent entrepreneurship (Davidsson, 2006). Our main theory-testing effort concerning process will be a systematic empirical test of Sarasvathy’s (2001) theory of effectuation, which also has its separate questionnaire section. CAUSEE offers an opportunity to systematically test this theory on a large, representative sample for the first time, applying a measuring instrument that has been carefully developed for this purpose. Other sections also capture process issues, e.g., ‘Bricolage’ and ‘Venture Idea Change’.
Assessment of outcomes is a tricky matter in studies of nascent and young firms. Because the ventures are at early (and slightly different) stages, traditional performance measures may not be relevant or available. In addition, it is not always the case that abandonment of the start-up is a worse outcome than is continuation, and similar issues arise for other outcomes on supposed ‘better-worse’ scales (see Davidsson, 2006; 2008). CAUSEE will employ a range of outcome variables such as the pace of progress in the process; reaching certain milestones like first sales or profitability; levels of sales, employment and profitability; growth, etc. This is an area where design work is still on-going for implementation in later waves.

As indicated by the graphical representation of the framework, entrepreneurship research has moved beyond simplistic, direct, additive and linear relationships. Issues of fit and interdependence between the different components will consequently be a key interest in the project (Davidsson, 2004a; Shane & Venkataraman, 2000). Detailed ideas about these contingencies have recently been elaborated in (Davidsson, 2005b).

5 Data Collection and Sample Selection Methods

The primary data set for CAUSEE comprise random samples of ‘nascent firms’ (N = 625) and ‘young firms’ (N = 561) obtained by screening 30,105 adults. Smaller supplementary, non-random samples of high potential ventures of both nascent firms (N = 102) and young firms (N = 113) were also generated. Below we describe the processes employed to identify start-up efforts and qualify them for the various samples.

Eligible cases that agreed to participate proceeded through a 40-55 minute long telephone interview. They will then be re-contacted for follow-up interviews every 12 months for four years. When a venture has been terminated an ‘exit interview’ is performed and the case is dropped from subsequent waves. Among the non-eligible cases every 50th respondent was selected for inclusion in a Control Group (n=506) to allow for basic socio-demographic comparisons.

5.1 Random Samples

Identifying a random sample of on-going business start-ups - young and emerging firms - is a very challenging task. Business registers are not available that
capture and youngest start-up efforts or all the established smallest firms. The pioneering PSED and GEM studies developed an approach to identify such start-up efforts by screening a random sampling of the adult population using random digit dialing (RDD).

To qualify as a nascent start-up effort, the screening interview attempts to establish that a start-up is not just a dream or a wish, but an idea that is actively worked upon. At the same time, it should be in the start-up process and not an operational business. Hence, the criteria must exclude cases that are either under- or over qualified (cf. Reynolds, 2007; Shaver, Carter, Gartner, & Reynolds, 2001). Likewise, the (non-overlapping) criteria for eligibility as a ‘young firm’ must establish the firm is in an operational but not mature stage.

The samples are obtained in the following way. First, the household is selected via RDD. After ascertaining that the respondents are over 18 years old and living in the household their gender is recorded and they are directed to a screening interview that has been refined over the years within the PSED-GEM research paradigm. The effects of the exact wording of the screening items – which can be profound – have been thoroughly examined by Reynolds (2009). We use the PSED II screening procedure, which tends to be inclusive rather than exclusive of ‘marginal’ cases. However, while our treatment of eligible ‘nascent’ cases is identical to the PSED II study we have adapted the screening mechanism to also capture ‘young firms’ with equal precision.

Figure 2 gives an overview of the screening questions and sequence (other than items 1-3 the wording is not necessarily verbatim). We start by asking all respondents three initial screening questions. In most cases the response to all of these is ‘no’, in which case they are excluded as non-eligible for the study. Other respondents are then asked a series of more detailed questions to confirm eligibility. If item 1 or 2 is answered ‘yes’ the case is initially treated as a ‘suspected nascent firm’. Those that answer ‘yes’ only to item 3 they are treated as a ‘suspected young firm’. If the respondent is involved in separate nascent and young firms we give priority to the nascent case. This is determined with an additional question and instruction item not included in the figure. Also excluded from the figure is the selection of respondents for the Control Group.
**Suspected nascent firms.** If 4a (confirming active activity to start a business over last 12 months) is answered ‘no’ the case is not eligible in this category and instead transferred to ‘suspected young firms’ to check if they are eligible under this category. Otherwise they continue to 5a, which they must affirm intended (part) ownership to stay eligible. If 6a (actually two items) identifies if the firm is already substantially trading. If so, the case is over qualified and instead transferred to the ‘suspected young firm’ sequence. Otherwise, the case is tentatively qualified as a nascent firm.

**Suspected Young Firm.** If minimum trading requirement is confirmed (4b: a twelve month period where revenues > costs half the time) and the business started in is 2004 or later (5b), the case is treated as tentatively confirmed young firm. If 4b is not confirmed the case is transferred to 4a and tested for eligibility as nascent firm. Under certain circumstances cases can get into a loop and arrive at 4b for the second time. This question is then skipped and they go directly to 5b. If that question is not affirmed the case is deemed ineligible.

Both types of (tentatively) confirmed cases are then asked what type of start-up the firms represent in terms of origin and governance. Those that report take-over or spin-off are asked additional questions to reconfirm that the case is eligible by age- and ownership stake criteria. For eligible cases the screening interview is concluded with transfer to either immediate continuation with the full interview (preferred) or to making an appointment for re-contact.

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**INSERT FIGURE 2 ABOUT HERE**

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Early in the full interview the cases are further classified on a number of dimensions. Two classifications are particularly important as they determine the eligibility or wording of a range of other questions later in the interview. These classifications concern whether the venture is mainly oriented towards provision of products or services, and whether it is a solo or team effort. If the respondent confirms the firm sells/will sell ‘mainly services’ they thereafter get the ‘services’ version of questions whereas all other answers (including ‘both equally’; ‘don’t know’ and ‘refused’) leads to the more generic ‘products’ wording. Solo vs. team is assessed through a sequence of questions that first determines whether any other owner is
involved; whether any other owner is a ‘romantic’ partner, and the total number of (prospective) owners. This makes it possible to make the important distinction between ‘romantic’ and other teams (Ruef, Aldrich, & Carter, 2003) and to apply appropriate wording and question content for solo, partner and multi-person team cases. Due to the venture level focus of CAUSEE this is critically important because not only the respondent’s beliefs, attitudes and qualities are important but also those of other individuals who have an influence on the venture. In this regard, CAUSEE differs from PSED II even when the ‘same’ questions are included.

For example, where PSED II asks all respondents “Which of the following two statements best describes your preference for the future size of this business: I want this new business to be as large as possible, or I want a size I can manage myself or with a few key employees?” CAUSEE asks respondents representing team start ups “Which of the following two statements best describes the preference your start-up team has for the future size of this business: We want this new business to be as large as possible, or we want a size we can manage ourselves or with a few key employees?” Similarly, where PSED II asks “Which came first for you, the business idea or your decision to start a business -- or did they occur together?”, in team cases CAUSEE first asks “Was it you or another team member who first came up with the idea for this business?” and words the following question (when applicable) differently as “Which came first for the person behind the idea for the business; was it the business idea or your decision to start a business -- or did they occur together?”

6 Descriptive results

Below we present selected Wave I results based on a data set comprising the random samples of both nascent and young firms. Table 2 shows the break-down of the CAUSEE. Results for both nascent and young firms from the main sample are analyzed (and contrasted where applicable). Cases from the high potential over sample are not included. Of the approximately thirty thousand participants (n=30,105) who completed the short telephone screener interview over two thousand (n=2,068) qualified as either nascent or young firms in approximately equal measure. The participation rate for those who qualify is high with sixty percent of those qualified to participate completing the questionnaire (n=1,186).
The main focus of the CAUSEE project is to examine the characteristics and
strategies of nascent and young Australian firms, and how these relate to eventual
outcomes. The project will be able to report more about outcomes in following years
when more becomes known about the fate of the businesses it follows. Here we report
provide an overview of the characteristics of Australian (Nascent Firms (NF) and
Young Firms (YF), and where possible compare these with international findings.

It is also possible to contrast characteristics of NF and YF. This allows tentative
interpretations about the success of groups of firms. By way of example, if we find
that a greater percentage of NF than YF are solo (single owner) businesses, then we
might initially assume that solo businesses are more likely to fail to become
operational young firms than partner or team businesses. However, there are in fact
four possible reasons for this difference:

1. Survival differences: As above, solo NFs are less likely to survive to become
   YFs.
2. Rate of progress differences: Solo start-ups remain in the nascent phase for a
   longer time on average than partner or team firms and therefore have a
   greater chance of being included as NFs in the survey.
3. General-level changes over time: More solo NFs are started now than when
   the YFs were started.
4. Firm-level changes over time: Some solo firms add owners in the process of
   developing into a YF.

These four possible explanations exist whenever we observe differences between NF
and YF. Consequently, it is important to interpret such differences with caution. In
NF-YF comparisons below we apply the interpretations we find to be the most
plausible. Later CAUSEE results that use longitudinal data will give more definitive
answers to what process is driving the observed differences between NF and YF.

6.1 Level of Entrepreneurial Activity

Although assessing and comparing the level of independent entrepreneurial
activity in the country is not the main purpose of CAUSEE (unlike the Global
Entrepreneurship Monitor) a few observations on level of activity deserve mention.
First, we have noted above that our random sampling procedure identified 3.4 and 3.5
percent of the respondents as involved in NF and YF efforts, respectively. These figures indicate a lower prevalence rate than what has usually been found for Australia in the GEM research 12.0 percent in 2006 and 11.6 percent in 2003 and 11.3% in 2000 (Kluyster, Hancock and Hindle, 2007; Hindle and O’Conner, 2004; Hindle and Rushworth, 2000; 2003). Recent US data suggests that at least in part this difference can be explained by subtle differences in sampling and screening criteria (Reynolds, 2007; 2009). By way of international comparisons, PSED II identified 1,571 NF cases from a sample of 31,845 (4.9 percent) adults in the US, indicating a higher prevalence rate than CAUSEE while using closely harmonised procedures (Reynolds and Curtin, 2008). The CAUSEE prevalence rate for NFs is clearly higher than reported for the year 1998 in the Swedish PSED counterpart study despite its somewhat less demanding criteria for inclusion (Delmar and Davidsson, 2000). Overall, our findings are consistent with the major impression from the GEM studies that the level of independent entrepreneurial activity in Australia is relatively high compared to other ‘developed’ or ‘Western’ countries. Our comparison with PSED II, however, suggests that the number of start-up efforts in relation to the size of the population is not quite as high as in the US.

6.2 What types of firms are started?

In this age of large multinationals, global franchising systems and omnipresent Internet it may be easy to think that traditional, independent, brick-and-mortar business start-ups are a dying breed. That would be a false conjecture. Our data show that the vast majority of our cases – 88 per cent – are independent new businesses started by an individual or a team. Only some 5 percent are franchises or multi-level marketing initiatives. A similar percent of businesses are partly backed by existing businesses. There are no marked differences between the NF and YF categories in these regards (Figure 3). Neither do Australian results differ markedly from those obtained in the US, except for the higher level of multi-level marketing programs in the US. When interpreting these data it should be remembered that cases are included only if a) the activity of the firm is new and b) the respondent is or is going to be an owner or part owner of the business.

INSERT FIGURE 3 ABOUT HERE

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As regards online business, approximately 80% of the Young Firms have no online sales at all, and less than 7 percent generate more than 50% of their revenue via the Internet. The online sales plans of the Nascent Firms are considerably higher (Figure 4) but it may still come as a surprise that more than half plan for no online sales and less than 10% are trying to set up a purely online business.

The difference between NF and YF is large and important. As discussed above, it may be interpreted as showing that:

1. There is a real increase in Internet orientated business occurring over time;
2. The expectations of Internet sales for NF may not match the reality of actual Internet sales once they develop into YF; or,
3. There is a difference between those who try and fail vs. those who succeed in setting up a business and make it survive its early years.

Subsequent CAUSEE findings using data from several points in time and following the fate of the NFs will be able to determine which effect is the stronger. In this case we believe all three effects are likely to be in operation. It appears plausible that there is an increasing trend for the proportion of businesses relying on Internet sales. NFs may also be naively optimistic concerning their ability to generate internet sales. Finally, the difference in internet sales is also likely linked to differences in the industry make up of the NFs versus YFs (reported below), which in turn may reflect differential survivability across industries.

It is important to note that the somewhat low figures for online sales do not necessarily reflect a lack of ‘Internet-savvy’ in these businesses. Responses to other questions reveal that 84 percent of the NFs either already have or plan to set up their own website, and 70 percent either already have or plan to join some Internet-based community or network for the purpose of furthering their start-up effort. Across NFs and YFs some 50 percent have used Internet-based sources of business advice. The use and rated importance of such sources is somewhat higher for the NFs, confirming an increasing role for the Internet among Australian start-ups over time.

To the extent that some might regard Venture Capital start-ups entering the market with a war chest of millions of dollars as in any sense ‘typical’ the CAUSEE
data provides a good reality check. Members of this stereotypical category – while possibly important on a ‘per firm’ basis – are so unusual that they are close to non-existent in a random sample of start-ups. In our sample of 1,057 firms we find just two (2) such firms – one NF and one YF. Indeed, findings in the US are similar. As pointed out by Reynolds and Curtin (2008) the total annual number of VC deals in the US is in the 2-3,000 region, so only a few hundred would involve start-ups. This should be contrasted to the annual number of start-up attempts in the US, which count in the millions. Consequently, VC-backed start-ups are close to non-existent in the PSED II random sample of some 1,000 Nascent Firms as well.

A profile of the industries in which Australian firms are being started in is displayed in Figure 5 in aggregated form. The following discussion is based on a finer delineation into 16 industries. The industries that comprise more than 10 percent of either NFs or YFs are Retailing, Consumer Services, Health, Education and Social Services, Construction and Business Consulting/Services. Manufacturing accounts for 5.9 percent of the start-ups, similar to the 4.5-6.5 percent reported for the US (Reynolds and Curtin, 2008). The Australian industry distribution for NFs is similar across the board to that reported for the US (PSED and PSED II do not report YF figures).

Figure 5 reveals sizeable and important differences between the NF and YF categories. In particular, the proportion of NF is much higher than YF in Retailing and Manufacturing. The tendency is similar (but weaker) for Consumer Services and Health, Education and Social Services. Again, there are different possible interpretations. Arguably, Manufacturing is a special case among those that have over representation among NFs. It may be that manufacturing firms are more complex (and ambitious) businesses to set up and that the start-up process therefore takes longer. This alone could produce the observed pattern even if the Manufacturing start-ups are as successful at getting started and surviving as the average start-up. However, the result may also reflect a higher tendency for Manufacturing start-ups to give up in the process due to the cost and complexity of getting such firms going. One plausible interpretation of the pattern for Retailing is that many dream of starting their own firm in this industry but fail to actually get it going or fail to sustain if for very long. This may be due to having low entry barriers while having to deal with large numbers of small-ticket, price sensitive customers. The same would apply to large parts of Consumer Services and Health, Education and Social Services as well.
The same pattern for Retailing is strongly supported by US data, which also has the percentage of Retailing NFs about twice that of the sector’s share of established firms (Reynolds and Curtin, 2008). The NF vs. YF difference we have identified is a warning signal for those who wish to start their own firm in Retailing or other low entry-barrier, high price-competitiveness industries.

In contrast, Construction and Business Consulting/Services show a marked higher prevalence of YF compared with NF. The Construction and Business Services start-ups deal with fewer and less price-sensitive customers; presumably the founders often have one or more important customer contacts established already when they set out to found their firms.

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INSERT FIGURE 5 ABOUT HERE

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6.3 Growth and Innovation Orientation

Despite reporting relatively high prevalence rates compared with other countries, the GEM project reports have voiced pessimism about entrepreneurship in Australia (Hindle and O'Conner, 2004; Hindle and Rushworth, 2002). For example, the former conclude that:

“Australia consistently displays relatively high rates of business participation, especially in the start-up phase, but growth intentions (through both export and technology) and incorporation of innovation are low despite a high claimed level of opportunity motivation.”

While the CAUSEE data in part confirm this view, comparative analysis with the US reveals that this is not a distinctly Australian phenomena. Indeed Australian firms are on par, or more advanced, than their US counterparts. Throughout our analyses one should realise that in the vast majority of cases we are talking about very small businesses. A minority has any employees at all at this early stage. About two thirds in both categories are still located in a residence or personal property. Similarly, about 50 percent in both categories are sole traders rather than some more advanced legal form, and most founders have limited growth aspirations. However, it is true for any country that in numbers a random sample of business start-ups will be dominated by relatively modest businesses. Besides, Apple, Google and IKEA also once resided
in homes or the iconic garage. An important question is whether Australia stands out from other countries in this regard – and if it stands out negatively.

In Table 3 some comparative indicators have been compiled. The PSED and PSED II data were sourced from Reynolds and Curtin (2008). It should be noted that the most relevant comparison is that between PSED II and CAUSEE-NF which are very similar in terms of sampling and time period. CAUSEE-YF should not be compared to the US data, which only refers to Nascent Firms.

The findings indicate Australian start-ups on average appear somewhat more sophisticated or ambitious than their US counterparts and are certainly no less advanced. The self-assessment nature of some of the questions may have led to biased (probably exaggerated) estimates. However, as the US and Australian respondents have received the exact same questions this limitation of the data can hardly explain any group differences. Unpublished data from the Swedish PSED counterpart study also confirm that Australian founders’ growth aspirations are high in comparison.

The NF vs. YF differences within the CAUSEE data perhaps suggest a higher degree of realism by YFs, which display lower figures for growth aspirations and technological sophistication. The difference may also be partially due to start-up cohorts becoming more ‘advanced’ over time. Still another reason that partially explains this difference is that more ambitious projects have a lower probability of getting to or surviving an operational stage (that is, to ‘graduate’ from nascent to young firms). While this would be a cause for concern it does not appear to be a uniquely Australian problem; similar tendencies have been observed before in other countries (Davidsson, 2006; see also Gimeno, Folta, Cooper and Woo, 1997). Finally, what looks like a trend towards US start-ups becoming less advanced over time (PSED II vs. PSED) is probably due to the sampling criteria being in some respects more inclusive in PSED II. That is, the latter study (like CAUSEE, which shares the same design differences to the original PSED) is likely to include a higher proportion of ‘marginal’ businesses, increasing the number of identified start-ups but bringing down the proportion of the overall sample that is more progressive or advanced.
6.4 The Founders and Their Motivations

An important first insight about business founders is that the group is not dominated by lone wolves. Just over 50 percent of both NFs and YFs are involved in efforts that have more than one owner. This is similar to what has been found in the US (Ruef, Aldrich and Carter, 2003) and Sweden (unpublished)\(^3\). Those who believe ‘multiple-owner start-up’ translates to a well-balanced team with members carefully selected for their complementary functional business specialisations are up for another reality check. In the CAUSEE data well over half of the multiple-owner start-ups are founded by spouses or \textit{de facto} couples (cf. Ruef et al., 2003).

Figure 6 displays the proportion of Solo, Partner (any two owners) and Team (three or more owners) start-ups. This figure reveals an unexpected and somewhat surprising finding: the proportion of Team start-ups is much smaller among YFs compared with NFs, implying that Team start-ups may be less likely to succeed. This appears to run counter to the general conclusion in the literature, which is that team start-ups tend to be more successful – and other parts of our data support that notion. Yet, it turns out that when we ask our YF founders (the only group ready to report such outcomes) about their satisfaction with the business’ performance in terms of net profit, sales, cash flow and value growth the Team founders are consistently more satisfied than the other groups. The solution to this apparent paradox may be that team based start-ups are more complex and more conflict prone and therefore make slower progress and/or are more likely to dissolve before getting to an operational stage. This would explain the lower occurrence of Team start-ups in the YF group. Once started, the Team start-ups appear to benefit from their greater human and other resources and therefore conform to the above-average performance generally found in earlier research.

\begin{center}
INSERT FIGURE 6 ABOUT HERE
\end{center}

\footnote{Importantly, this does not mean that a majority of \textit{start-up efforts} are team-based in either country. Because the sampling mechanism samples households, team start-ups with owners from different households have higher sampling probability than solo start-ups and those started by several members of the same household.}
Knowing that many ventures have more than one founder we focus on the individual founders-respondents in the remainder of this section. However, where applicable we have asked the respondent to answer on behalf to the team.

While Australian business founders come in all ages there is a peak around the age of 40. The unweighted average age among both NFs and YF is 43 years, which is significantly younger than the Control Group not involved in business start-ups (mean age 49). At least based on the unweighted data the mean age appears slightly higher than in comparable samples in the US and Sweden (see Delmar and Davidsson, 2000; Reynolds and Curtin, 2008); however both report proportions in age classes rather than mean age so an exact comparison is not possible.

One could speculate that business founding as a further career in retirement would be comparatively frequent within Australia given its relatively early retirement and lump sum payout of superannuation funds. This does not seem to be the case, however. The vast majority of founders (82 percent) come out of employment or self-employment. Further, while 19 percent are over 55 years only 7 percent are above 65 and among Nascent Firm founders less than 3 percent describe themselves as retired, which is far less than the Control Group figure of 27 percent. While many international studies have pointed out unemployment as a major driver of firm foundation this is not the case currently in Australia. Less than 3 percent of the NF founders are unemployed. This is equal to the Control Group figure, so we find no heightened tendency among the unemployed to found their own businesses.

This notion is also supported by responses to a subjective question about the motivation to found the new business. We asked whether the decision was driven mainly by perception of opportunity or mainly by sense of necessity (lacking other alternatives for gainful employment). Over 70 percent founders say the start-up was opportunity driven, while only 9 and 13 percent of NF and YF respectively, see it as borne out of necessity. The remainder allow for a bit of both or volunteered an answer suggesting that although not exactly forced by necessity they are seeking better alternatives to an existing job. This dominance of opportunity driven business foundings in the CAUSEE data mirrors what has previously been reported from the GEM project (Hindle and O’Conner, 2004, 2006; Hindle and Rushworth, 2003). The proportion of NF claiming pure necessity motives reported for the US by Reynolds and Curtin (2008) is 12 percent.
It is also commonly believed that business founders first decide that they want to go into business for themselves; that they want to start a company. Then, it is assumed, they search for and evaluate several alternative business ideas before they settle for one, which they further develop and eventually create their business around. Bhave (1994) found that an alternative process was also common. In this second model it is a specific opportunity, rather than a long nurtured dream to have their own business, that triggers the decision to found a firm. Consequently, no search for alternative business ideas is involved; either a start-up is attempted around the one, triggering opportunity or no start-up is attempted. CAUSEE data suggest ‘business idea as trigger’ process is much more common than is the sequence where the decision to start a business comes first (Figure 7). Only 16 percent of the NFs claim the decision to start a business came first. However, while this process sequence was the least common also among the YFs it is substantially more common in that group (25 percent). This may reflect either a positive effect of a stronger commitment to making firm start-up a reality, or that selecting a venture idea based on analysis of several alternative ideas makes it easier to get up and running and/or survive.

Figure 8 shows that female participation in start-up activity in Australia is relatively high although not on par with that of men. The 43 percent of the Australian NFs being female is at least equal to what is found in the US (although the form of reporting used by Reynolds and Curtin, 2008, makes exact comparison difficult). The proportion of females is definitely higher than that reported for Sweden; a country with very high female participation in the workforce and a reputation for relatively high gender equality in general (see Delmar and Davidsson, 2000).

Figure 9 shows that there are marked differences in the industry distribution of start-ups by gender. Comparing these results with those displayed in Figure 4 leads to an important finding: women are over represented in those industries that have a low survival rate of NF (i.e., an over representation of YFs compared to NFs). Conversely, women are under represented in some of the industries with a higher survival rate.
This suggests many women business founders are active in industries where successful establishment and survival of the business is relatively difficult. It also suggests that what may erroneously be interpreted as female under performance in a less careful analysis is in reality an industry effect. The interpretation that the NF-YF industry proportion differences are an industry effect rather than a gender effect is supported in our data by the fact that the NF-YF gender proportion difference is small and not statistically significant despite the ‘industry handicap’ female founders as a group face. This interpretation is also consistent with multivariate analyses in earlier research – including an Australian study – that while women are under represented among business founders as well as in the small minority of rapidly growing firms, there is no general under performance by females once they have entered the process of founding a firm (Davidsson, 2006; DuRietz and Henrekson, 2000; Watson, 2002).

We also find that that business venturing is well dispersed across the diverse Australian population. There are no statistically significant differences in the ethnic composition of NFs vs. YFs vs. Control Group members. All groups are dominated (81-84 percent) by people of European decent, other tested categories being Indigenous Australian (2-4 percent); Asian (3-5 percent); Middle Eastern (0.5-1 percent); Mixed Ethnicity (3-4 percent) and Other (6-7 percent). Neither is there any marked tendency for immigrants or those with parents born outside Australia to be differently represented among business founders, except for a somewhat peculiar over representation of people with one, and only one, parent (usually the mother) born overseas among the NFs (15 percent compared with 10 percent for YF and CG). It is hardly evidence that deserves elaborate interpretations.

Finally, it is worth pointing out that higher educated individuals are over represented as business founders. The data reveals 37 percent of the business founders are university graduates which is higher than the Control Group (27 percent) and higher than in the PSED II study in the US (approx. 33%; Reynolds & Curtin, 2008). In addition, a large proportion of the founders have previous experience from owning and running businesses. Just over 50 percent of the NFs and YFs combined were started by individuals or teams that had previous experience from starting a firm. This
evidence on education and experience again challenges earlier concerns about the ‘poor quality’ of Australian start-ups.

An even larger share of business founders, 57 percent, had at least one parent who had been running their own business. This is considerably higher than in the Control Group, where 45 percent reported such parental role model experience. The CAUSEE figure is also slightly higher than international comparisons: 52 and 53 percent for the US PSED and PSED II, respectively (Reynolds and Curtin (2008) and 50 percent in Sweden (Delmar and Davidsson, 2000). While PSED II does not have a Control Group, PSED is about the only study ever reported where there is no over representation of business founders among those who have a self-employed parent (Davidsson, 2004b; Kim, Aldrich and Keister, 2006). Swedish PSED results reported by Delmar and Davidsson (2000), by contrast, indicate an even stronger parental role model effect (50/37 percent) than what we find for Australia (57/45 percent).

6.5 Sources of Funding and Advice

The CAUSEE questionnaire captures considerable amounts of information about the financial and knowledge resources accessed and used by start-ups. In this section we focus mainly on a set of questions regarding the sources of funding and advice that are used by firms and whether each source is of major or minor importance for them (we will also take glimpses from other parts of the questionnaire).

As regards funding, we have noted already that Venture Capital funding is close to non-existent in this random sample of start-ups. Those who build their expectations on close familiarity with the small business sector – or the Venture Capital industry – rather than popular media images may not be surprised by that fact. Yet it may come as a surprise that a majority of firms – as many 55 percent – plan to realise the start-up without any outside funding at all. Although aversion to outside control is a well-known characteristic of many small firm owner-managers (Sapienza, Korsgaard and Forbes, 2003), the strength of this finding is nonetheless surprising. There may be several explanations. First, we have noted that many start-ups are very modest, tiny scale efforts that may not require much in the way of start-up capital. Second, some founders may underestimate their need for funding; not least the need for working capital once they start trading. Third, we have noted that many founders have run businesses before; many of those presumably are in control of funds from prior business success that can cover the start-up costs. Finally, many founders apply
creative, iterative and incremental strategies – known under labels such as ‘effectuation’ (Sarasvathy, 2001), ‘financial bootstrapping’ (Winborg and Landstrom, 2001) and ‘bricolage’ (Baker and Nelson, 2005) – that may make it possible for them to reach impressive results with seemingly very small financial inputs. These are themes that the CAUSEE design covers and have been reported elsewhere (listed below).

Table 4 presents data on the use of various sources of funding for the start-ups. The wording of the question and response alternatives varied slightly between NFs and YFs. They are both asked whether each source of funding is a major source (more than 20 percent of funding needs), minor or not used at all. However, for YFs we ask ‘within the past 12 months’ whereas for NFs we ask ‘since the earliest days…’. Also we ask about the ‘founders’ (NFs) vs. ‘owners’ (YFs). Therefore, while the data are roughly comparable, formal statistical testing or far-reaching interpretation of any differences is not advisable.

What is most striking about the data in Table 4 is the very limited use of many sources. Representatives of some sources of funding may be surprised at what small share of the potential market they serve (or are ‘invited’ to serve). Striking is also the relatively small differences between NF and YF. They are very similar other than the higher use of personal savings by NFs and to some extent the higher use of customers and suppliers by YFs – both a natural drift as the firms enter an operational stage. In most cases firms do not seem to undergo revolutionary change in their funding (source) structure from ‘inception’ through early life.

Only one source – personal savings – is used by more than 50 percent of all start-ups. Despite (in)famous references to the ‘3 F:s’ – friends, family and fools – the instances of loan or equity funding from such sources are few. Only single-digit percentages of firms use such sources as major providers of funding (meaning 20 percent or more of funding needs). Among ‘bank products’, credit card debt is by far the most used, and even among the YFs personal loans and overdrafts appear in total a more important source of funding than business loans and overdraft facilities. It can be noted, though, that personal bank loans rank third on the list of sources of major importance. In another part of the questionnaire the Nascent Firm founders were
asked whether they had opened a bank account for the business. Close to 40 percent said they had done so and another 47 percent planned to do so while 9 percent reported they were using an existing account for the business’ purposes.

With that let us turn to sources of (business) advice. The use of different sources for such is displayed in Table 5.

Here we see a more diverse use of sources in many cases compared to the funding analysis. Yet, many providers may still be surprised at the high levels of non-use. For example, some 75-85 percent report not using government agency or NGO consultants, tax consultants, or other commercial consultants. Again the patterns for NFs and YFs are similar. The relative importance of family members, and to some extent friends as well, is lower for YFs; arguably a natural and expected development. Somewhat surprisingly, YFs do not rate customers and suppliers important to a higher extent than do NFs. As we have noted already, NFs are more Internet-intensive than are the YFs. We may note that this is not associated with a difference in the mean age of the founders between the categories.

Chartered accountants are the most important type of paid consultant by a considerable margin – ranking 4th in ‘popularity’ in Table 5. In another part of the questionnaire we asked the NF founders whether they had yet retained an accountant and a lawyer for the business. We also asked about other potential sources of contacts and advice – joining associations and networks for the purpose of helping developing the business. The results are reported in Table 6.

The perceived importance of accountants again stands out in these data, with only 13 percent regarding it not relevant to retain an accountant. By contrast, 50 percent of the founders do not believe they need to retain a lawyer for the purpose of this business. Notable also is the relatively low use of trade/industry organisation membership and joining formal, face-to-face business networks. Especially the latter is a cause for concern as this has been singled out in previous research as one of the
strongest contributing factors for taking the emerging firm to an operational stage (Davidsson and Honig, 2003).

7 Summary

The Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE) is the largest study of new firm formations ever undertaken in Australia. The project aims to find out what factors initiate, hinder and facilitate the process of establishing new, independent businesses. For this purpose, the project follows the development of two categories over time; on-going start-up efforts (Nascent Firms) and operational firms that started trading in 2004 or later (Young Firms). In this paper we have outlined our data collection methods and reported selected, descriptive findings from the first wave of data collection in this multi-wave, four-year study.

CAUSEE relies heavily its forerunners, most notably the PSED studies and to a lesser extent GEM, and the concurrent PSED II study. Most importantly, the screening process to identify nascent firms and several parts of the survey are harmonised with PSED II. This said, CAUSEE has several unique features: a) it includes a random sample of young firms (up to three years old at first contact); b) it includes a non-random over sample of ‘high potential’ nascent firms and young firms; c) it focuses consistently on the venture level of analysis; d) the questionnaire contents incorporates several theoretically driven scales, some newly developed, such as effectuation, bricolage, venture idea newness, venture idea relatedness and resource-based view that have not previously been part of a study of this type; and e) the empirical context, Australia, is new for this type of longitudinal study.

Below we reiterate some of the more important findings:

1. Our results are consistent with the conclusion in previous research that in quantitative terms entrepreneurial activity, measured as the prevalence of owner-managed young firms and on-going start-up attempts, is relatively high in Australia. However, our data suggest the numbers in relation to the size of the population is lower than in the US.

2. The typical start-up is a ‘traditional’, fully independent, brick-and-mortar business. Few are franchises or otherwise backed up by an existing business; 80 percent of Young Firms have no online sales (although Internet use is higher for other purposes and increasing over time); most are at this early
stage sole proprietorships that are run from home and do not yet have any employees, and only a minority of businesses are strongly growth-oriented or highly sophisticated in technological terms. However, it is true for any country that the average start-up is relatively modest, especially at early stages.

3. Our analyses show that Australian start-ups in fact compare well to start-ups in the US in that many firms are founded by experienced and highly educated founders and that the firms they found are at least as growth oriented and technologically sophisticated. If anything, Australian start-ups on average appear more progressive than their US counterparts.

4. Start-up efforts in industries like Construction or Business Services seem much more likely to get their businesses up and running than do those that try to set up firms in Retailing; Consumer, Health or Educational Services, or Manufacturing. That is, to the extent the founders can choose, industry selection is a critical success factor.

5. More than 40 percent of Australian business founders are women, which makes the female participation in business start-ups comparatively high – on par with the US and higher than many other countries.

6. However, many women founders go for industries that are relatively tough to succeed in, like Retailing and Consumer Services. Despite this there is no indication of female under performance – once in the process they appear to do no worse or better than men.

7. Teams with three or more founders seem much less likely to get their start-ups to an operational stage. Once up and running, however, they perform better than solo entrepreneurs. It thus appears that being a team adds complexity and conflict potential that may make the effort come out stillborn, but once up and running the team start-ups seem to benefit from having a broader knowledge-, resource- and network base.

8. The range of funding sources commonly used is narrow. Most start-up businesses rely heavily on personal savings and credit card debt for funding. Not only bank loans but also contributions from family and friends are relatively low in frequency. Venture capital-backed start-ups make up a minuscule share of the population of business start-ups.
9. The range of sources used for information and advice is broader and includes widespread use of Internet-based sources. Accountants are by far the most important paid consultants. The low emphasis founders put on joining face-to-face business networks for the purpose of furthering their start-up effort is a cause for concern, as previous research has pointed to this as one of the strongest contributing factors for bringing the start-up to an operational stage.

Elsewhere we have reported more detailed analyses of specific sections of the CAUSEE contents including a descriptive analysis of the high potential sample (Davidsson, Steffens, Gordon and Senyard, 2008), bricolage and firm progress (Senyard, Baker and Davidsson, 2009), effectuation and venture idea newness (Garonne and Davidsson, 2009), venture newness and relatedness (Dissanayake, Gordon, S. and Davidsson, 2008), bricolage and the resource-based view (Steffens and Senyard, 2009; Steffens, Senyard and Baker, 2009) and habitual entrepreneurs (Gordon, and Steffens, 2009). When additional waves of data have been collected the analyses will also turn to more direct assessment of developments over time in nascent- and young firms rather than relying on the assumption that a comparison of these two groups reflects changes over time.
References


http://www.causee.bus.qut.edu.au/results/


<table>
<thead>
<tr>
<th>Section</th>
<th>Purpose</th>
<th>Applies to</th>
<th>Harmonised with PSED II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classifying the venture</td>
<td>Categorising the venture on a number of dimensions</td>
<td>All Ventures</td>
<td>Mostly</td>
</tr>
<tr>
<td>Gestation activities</td>
<td>Initiation and completion of certain activities typical for start-ups, inclusive of time stamps for these events</td>
<td>Nascent Ventures</td>
<td>Yes</td>
</tr>
<tr>
<td>Activities</td>
<td>Similar to above but adapted to young firms and without time stamps</td>
<td>Young Firms</td>
<td>N/A</td>
</tr>
<tr>
<td>Business idea newness</td>
<td>Degree of 4 types of newness (product, market, process, type of buyer)</td>
<td>All Ventures</td>
<td>Unique to CAUSEE</td>
</tr>
<tr>
<td>Business idea relatedness</td>
<td>Degree of relatedness to prior knowledge; available resources; opportunities</td>
<td>Nascent Ventures</td>
<td>Unique to CAUSEE</td>
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<td>Business idea change</td>
<td>Different types of changes of the idea and reasons for these changes</td>
<td>Nascent Ventures</td>
<td>Unique to CAUSEE</td>
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<td>Effectuation</td>
<td>Behaviors reflecting theoretical effectuation principles</td>
<td>All Ventures</td>
<td>Unique to CAUSEE</td>
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<tr>
<td>Team Resources</td>
<td>The investment of Human, Social, Financial and other resources</td>
<td>All Ventures</td>
<td>Partly</td>
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<td>Resource advantages</td>
<td>Identification of particular resource strengths and weaknesses (RBV)</td>
<td>All Ventures</td>
<td>Unique to CAUSEE</td>
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<tr>
<td>Bricolage</td>
<td>Use of frugal tactics for acquiring and combining resources</td>
<td>All Ventures</td>
<td>Unique to CAUSEE</td>
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<tr>
<td>Sources of funding and advice</td>
<td>Use and relative importance of different sources</td>
<td>All Ventures</td>
<td>Unique to CAUSEE/funding info simplified in CAUSEE</td>
</tr>
<tr>
<td>Future expectations</td>
<td>Assessing the founders/ views on the firm’s future development</td>
<td>All Ventures</td>
<td>Partly</td>
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Table 2. CAUSEE Wave I sample breakdown

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<tr>
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<tr>
<td>Participants Screened</td>
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<tr>
<td>Qualified to Participate</td>
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<tr>
<td>Nascent Firms</td>
<td>1,010</td>
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<td>Young Firms</td>
<td>1,058</td>
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<tr>
<td>Completed Questionnaires</td>
<td>1,186</td>
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<tr>
<td>Nascent Firms</td>
<td>625</td>
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<tr>
<td>Young Firms</td>
<td>561</td>
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</table>

Table 3. Relative potential/sophistication for US and Australian Start-Ups

<table>
<thead>
<tr>
<th></th>
<th>US:</th>
<th>US:</th>
<th>AUS:</th>
<th>AUS:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSED</td>
<td>PSED II</td>
<td>CAUSEE (NF)</td>
<td>CAUSEE (YF)</td>
</tr>
<tr>
<td>Wants maximum growth rather than manageable size</td>
<td>22%</td>
<td>22%</td>
<td>25%</td>
<td>16%</td>
</tr>
<tr>
<td>Considers the business to be 'hitech'</td>
<td>36%</td>
<td>24%</td>
<td>31%</td>
<td>27%</td>
</tr>
<tr>
<td>Claims R&amp;D expenditure will be a major focus</td>
<td>29%</td>
<td>25%</td>
<td>45%</td>
<td>24%</td>
</tr>
<tr>
<td>Firm has moved to own, dedicated premises</td>
<td>14%</td>
<td>9%</td>
<td>10%</td>
<td>18%</td>
</tr>
<tr>
<td>Legal form is some type of limited liability company</td>
<td>20%</td>
<td>17%</td>
<td>18%</td>
<td>26%</td>
</tr>
<tr>
<td>Has hired employee(s)</td>
<td>14%</td>
<td>7%</td>
<td>14%</td>
<td>38%</td>
</tr>
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</table>
Table 4. Sources of Funding

<table>
<thead>
<tr>
<th>Source</th>
<th>Not used</th>
<th>Minor source</th>
<th>Major source</th>
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</thead>
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<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>72</td>
</tr>
<tr>
<td>Personal credit card</td>
<td>55</td>
<td>53</td>
<td>21</td>
</tr>
<tr>
<td>Money from another business that the founders' also own</td>
<td>85</td>
<td>96</td>
<td>9</td>
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<tr>
<td>Government grants</td>
<td>93</td>
<td>94</td>
<td>2</td>
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<tr>
<td>Delayed payment terms from suppliers</td>
<td>87</td>
<td>78</td>
<td>5</td>
</tr>
<tr>
<td>Advance payment from customers</td>
<td>86</td>
<td>78</td>
<td>5</td>
</tr>
<tr>
<td>Loans from family members</td>
<td>86</td>
<td>91</td>
<td>5</td>
</tr>
<tr>
<td>Loans from friends, employers or colleagues</td>
<td>95</td>
<td>96</td>
<td>1</td>
</tr>
<tr>
<td>Founders’ personal secured-bank loans</td>
<td>83</td>
<td>84</td>
<td>12</td>
</tr>
<tr>
<td>Founders’ other personal loans, overdraft or other credit facilities from a bank</td>
<td>85</td>
<td>84</td>
<td>6</td>
</tr>
<tr>
<td>Secured bank loans to the business itself</td>
<td>92</td>
<td>91</td>
<td>5</td>
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<tr>
<td>Other loans, overdraft or other credit facilities from a bank to the business itself</td>
<td>94</td>
<td>92</td>
<td>1</td>
</tr>
<tr>
<td>Loans from any other organisation to the business itself</td>
<td>96</td>
<td>94</td>
<td>1</td>
</tr>
<tr>
<td>Equity from family members</td>
<td>95</td>
<td>91</td>
<td>1</td>
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<tr>
<td>Equity from friends, employers or colleagues</td>
<td>98</td>
<td>99</td>
<td>1</td>
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<tr>
<td>Equity from other private investors (‘business angels’)</td>
<td>98</td>
<td>99</td>
<td>1</td>
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<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>
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*Note:* Entries in percent. Entries may not sum to 100 vertically due to rounding error.
Table 5. Sources of Advice

<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>Family members</td>
<td>50</td>
<td>51</td>
<td>25</td>
</tr>
<tr>
<td>Friends, employers or colleagues</td>
<td>36</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>External investors like venture capitalists or 'business angels'</td>
<td>100</td>
<td>92</td>
<td>0</td>
</tr>
<tr>
<td>Board members other than those categories already mentioned</td>
<td>85</td>
<td>92</td>
<td>10</td>
</tr>
<tr>
<td>Bank staff member</td>
<td>85</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>Potential/actual customers</td>
<td>38</td>
<td>46</td>
<td>38</td>
</tr>
<tr>
<td>Potential/actual suppliers</td>
<td>56</td>
<td>63</td>
<td>27</td>
</tr>
<tr>
<td>Chartered accountant</td>
<td>61</td>
<td>48</td>
<td>25</td>
</tr>
<tr>
<td>Lawyer</td>
<td>79</td>
<td>79</td>
<td>14</td>
</tr>
<tr>
<td>Consultant at government agency or not-for-profit organisation</td>
<td>73</td>
<td>80</td>
<td>18</td>
</tr>
<tr>
<td>Independent tax consultant</td>
<td>81</td>
<td>74</td>
<td>14</td>
</tr>
<tr>
<td>Other commercial consultant</td>
<td>85</td>
<td>85</td>
<td>11</td>
</tr>
<tr>
<td>Internet websites or communities</td>
<td>49</td>
<td>56</td>
<td>30</td>
</tr>
<tr>
<td>Other business media (print &amp; TV/radio)</td>
<td>60</td>
<td>63</td>
<td>31</td>
</tr>
</tbody>
</table>

Note: Entries in percent. Entries may not sum to 100 vertically due to rounding error.

Table 6. Nascent Firm’s Advice and Networking Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No, but will in the future</th>
<th>No, not relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has retained accountant?</td>
<td>46</td>
<td>41</td>
<td>13</td>
</tr>
<tr>
<td>Has retained lawyer?</td>
<td>17</td>
<td>33</td>
<td>51</td>
</tr>
<tr>
<td>Has become member of trade/industry association?</td>
<td>16</td>
<td>46</td>
<td>38</td>
</tr>
<tr>
<td>Has contacted (Gov. or NGO) business assistance organisation?</td>
<td>34</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>Has joined Internet-based network?</td>
<td>21</td>
<td>49</td>
<td>31</td>
</tr>
<tr>
<td>Has joined face-to-face business network or service club (e.g., Rotary; Lions)?</td>
<td>13</td>
<td>35</td>
<td>52</td>
</tr>
</tbody>
</table>

Note: Entries in percent. Entries may not sum to 100 vertically due to rounding error.
Figure 1. The components and fit of the process of emergence of new organisations and activities
Figure 2. Screening Procedure

**Initial Screening Questions**
(N = 30,105)

1. Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?
2. Are you, alone or with others, currently trying to start a new business or a new venture for your employer, an effort that is part of your normal work?
3. Are you, alone or with others currently the owner of a business you help manage, including self-employment or selling any goods or services to others?

- **Suspected Nascent Firm**
- **Suspected Young Firm**
- **Confirmed Nascent Firm**
- **Confirmed Young Firm**

**Confirmation Questions for Suspected Nascent Firm**

4a. Over the past twelve months, have you done anything to help start a new business, such as ...?
5a. Will you personally own all or part of this business?
6a. Has your monthly revenue been more than monthly expenses for more than six of the past twelve months?

- **Confirmed Nascent Firm** (N = 1,010)

**Confirmation Questions for Suspected Young Firm**

4b. Has the business experienced any 12-month period where revenues were greater than all costs at least half the time?
5b. In what year did this business or self-employment start?

- **Confirmed Young Firm** (N = 1,058)
Figure 3. Type of start-up.

![Type of Start-Up](image)

Figure 4. Percent Internet Sales.

![Internet Sales](image)
Figure 5. Percent Industry Affiliation.

![Industry Affiliation Chart]

Figure 6. Solo, Partner or Team Start-Up.

![Start-Up Team Type Chart]
Figure 7. Which Happened First, Business Idea Or Decision To Start?

![Bar chart showing the proportion of firms where the business idea or start-up decision occurred first.

Figure 8. Proportion Male and Female Founders.

![Bar chart showing the proportion of male and female respondents in young and nascent firms.]
Figure 9. Industry Affiliation by Gender.