Paul D. Reynolds' Prize Lecture: Understanding Business Creation–Serendipity and Scope in Two Decades of Business Creation Studies

*2004 Award Winner**

Introduction

I appreciate the award very much; I consider it recognition for the work of hundreds of scholars and researchers that have been part of three consortia I have helped organize and coordinate over the past 15 years. Swedish colleagues have been an integral part of all three of these research programs.

As many people ask, I thought I would touch briefly on how I got involved in this stream of research, focusing on the creation of new firms, the antecedents, and the major consequences.

It started when I was getting bored with trying to understand the major moral or ethical issues associated with doing social science research with human participants. As you can imagine, this was a pretty broad topic, as it is pretty hard to do social science research without human participants. Soon after finishing my doctoral dissertation in 1969, there was a period of intense discussion around the moral implications of doing social science research. The major elements involved trying to resolve a number of conflicting values: respect for others as human beings with the right to control their lives; expanding knowledge that may have substantial social and individual benefits – particularly for future generations; and what it means to be both a social scientist and a good person. After five years of intensive work in the area – resulting in two books (Reynolds 1982) – I decided that it was easier to defend the moral value of a social science research program if it was related to some important aspect of life and had a potential for improving the human condition. It was also likely to get more attention if it was interesting and fun.

The first FSF-NUTEK award winner was David Birch. It was in the early 1980's when his major results were receiving a great deal of attention – and substantial disbelief. Many had trouble accepting – particularly scholars that focused on large organizations and basic industry sectors like manufacturing – that small firms were a larger source of new jobs than established big firms. I began to review this material and found it intriguing – the implications were obviously very significant.

I had a colleague, Tom Scott, at the University of Minnesota who managed the Center for Urban and Regional Affairs [CURA]; this unit provided funding for a survey of new firms in Minnesota (Reynolds and West 1985). It took a lot of work to straighten out the technical procedures, but the results confirmed Dave Birch's major findings. This led to another more comprehensive survey in Pennsylvania (Reynolds and Freeman 1987) – while I was on sabbatical leave at the University of Pennsylvania – and a second, more comprehensive Minnesota survey (Reynolds and Miller 1987). Combining the two surveys – which were almost identical in procedures and data sets – allowed for comparisons of 23 regions, 10 in Pennsylvania and 13 in Minnesota (Reynolds and White 1997).

There was a lot of regional variation, the three urban centers – Philadelphia, Pittsburgh, and Minneapolis-St. Paul – tended to have considerably more new firms than the rural regions; in rural regions the action was concentrated in the small and medium sized cities. Population growth seemed to have a major impact on new firm creation, probably because it represented an increase in demand for goods and services. In developed economies – like the US and Sweden – most that start new firms are trying to take an advantage of an opportunity; "unmet demand" is perhaps the most common type of business opportunity mentioned by those starting new firms.

One of the outcomes of the Dave Birth findings was a U.S. Small Business Administration project to create a comprehensive US data set that would replicate Dave's initial work. They eventually created bi-annual estimates of new firm creation, firm growth and contraction, and firm termination for each of the 3,124 counties and 70 economic sectors in the US for 12 years. Working with a regional economist – Wilbur Maki (a second generation descendent from

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Finnish immigrants to Minnesota) – we did an assessment of the regional factors affecting variation in new firm births across 380 Labor Market Areas of the US (Reynolds and Maki 1992).

But this was done concurrently with a six country European consortia organized with David Storey of the University of Warwick; Dave Storey was the third FSF-NUTEK award winner. We were able to locate colleagues across 6 European countries – France, Germany, Italy, Northern Ireland, Sweden, and the UK along with the US – to complete a series of harmonized studies where each country team did an analysis using sub national regions as a basic unit of analysis, used different measures of new firm creation to compute prevalence of firm birth rates, and considered the same set of independent variables as candidates for explaining variation in the birth rates (Reynolds, Storey and Westhead 1994). The Swedish team – which may have had the best data set of any country – included Per Davidsson, Leif Lindmark, and Christer Olofsson.

The result was more successful than could have been hoped for. Despite substantial variation in the operation definitions of all the major factors – the ability to explain or account for variation in firm birth rates was substantial, from 60 percent to 90 percent. Furthermore, the same factors had a major impact in all the country analyses – measures of demand growth, urbanization, higher unemployment, local wealth, and an economy with a high proportion of small businesses. Predictions for all economic sector models were more successful than manufacturing sector only models. The results were published in a special issue of Regional Studies in 1994, just 10 years ago.

But despite the success of this effort – which involved over 20 people working in 7 national teams – a problem remained.

Regional characteristics do not start new businesses, people start new businesses.

This led to a new question:

What leads a person – most of whom have jobs – to wake up one morning and decide to start a new business? And how do they go about it?

By then, about 1990, I had left the sociology department at the University of Minnesota and was serving as an entrepreneurial professor chair-holder at Marquette University. This gave me the chance to increase a focus on the actual start-up process itself. I was able to organize another consortium – with faculty from three public and one private Wisconsin university – and obtain funding for the Wisconsin Entrepreneurial Climate study from a state agency. Nancy Carter, with us today, was an important part of this effort. This project had two basic components. First, a study of new firms in Wisconsin, basically a replication of the earlier studies done in Pennsylvania and Minnesota was one piece of the program. But the second initiative was to utilize the financial and human resources to develop a procedure for locating and interviewing nascent entrepreneurs, those working to create a business that was not – as yet – operational. No one else had ever tried to develop a representative sample of nascent entrepreneurs and most people that heard about the effort though we were crazy (Palit and Reynolds 1993; Reynolds and White 1993).

Things have never been the same

The surprises have come so quickly that it is almost impossible to keep track of them; most have dramatic implications for both the understanding of the creation of new firms as well as the policies for having an impact on the process.

The procedure we developed – and it has been considerably refined over the past decade, is to randomly identify adults in the population and ask them – more or less – if they are involved in trying to start a new firm. The basic questions are very simple and can be translated with little problem into almost any language – over 40 so far. The result is an estimate of the prevalence rate – number of people per 100 in the population – that are actively involved in trying to start a business they will own – at least own a part of it.

We never dreamed that the scope of this phenomena – the presence of nascent entrepreneurs – could be so broad. We expected about 1–2 percent of the population – one in fifty – would qualify, but it was closer to 4 percent in this initial Wisconsin study. This was confirmed in a US wide pilot study in the same year – 1994. Participation in start-up efforts is much larger than expected because the majority – about two-thirds – don't finish the process and launch a new business. They enter the start-up process and eventually give up, although sometimes it may take over 5 years to reach closure. There are three to four start-up efforts for each new business birth – a new firm selling goods and services.

More surprising, there is no one way to create a new business, every conceivable sequence of events occurs in the start-up process, including sales or income before giving serious thought to starting a new business. Most who get involved – four in five – do so while they have a job or are running another business. This is why the high level of activity had been missed in traditional labor market studies; it is a secondary activity for most during the gestation process. Almost the last event in the sequence is for the nascent entrepreneur to quit their "day job" and devote full time to the new business – if it looks like it will be successful. Despite what you may have heard, most that start new businesses tend to be "risk averse."

The successes of the Wisconsin study lead to an effort to create a US-wide study. Two massive proposals from the University Michigan Institute for Social Research submitted to the US National Science Foundation were turned down. So a group of us (including Bill Gartner and, again, Nancy Carter) proposed to our colleagues in entrepreneurship centers across the world that a consortium be organized to fund the US Panel Study of Entrepreneurial Dynamics. We ended up with over 30 member units and over 100 scholars involved in this effort. A number of the teams were outside the US and many adapted the US design for implementation in their own countries (the Swedish team, led by Per Davidsson with Frederic Delmar and Johan Wiklund, was among the best, but other studies were done in Argentina, Canada, Greece, Norway, Netherlands, and the UK). The Kauffman Foundation of Kansas City stepped in halfway through the project and funded the third and fourth wave of data collection – which was completed in 2003. Further, a handbook describing the rational for the design of the interview schedules that will serve as a guide for analysis is just now being published by Sage (Gartner *et al.* 2004).[1] And a guide book is mandatory, for the four wave data set on 1,300 persons now has over 5,000 variables.

The basic message from these studies is that a lot of things affect the initiation and completion of the business start-up process. Many can be shown to have a statistically significant impact, some types of

people have more problems completing the process than others, and the new firm creation process reflects a very complicated set of causal processes – mass media sound bites are generally very misleading in terms of the actual underlying mechanisms, with the emphasis on multiple mechanisms.

As the US panel study was stabilizing in 1998, the idea developed at the London Business School that it might be useful – and popular – to compare the level of entrepreneurship across countries. A precise European – North American comparison seemed of particular interest. By this time the Dave Birth "new/small firms create jobs" findings had been confirmed across a number of OECD countries – after the official data bases had been properly reorganized. The "US job machine" was receiving a lot of attention in Europe; about this time US unemployment rates were less than half that of Europe.

The LBS faculty member contacted a colleague at Babson College. By then I was an endowed chair holder at Babson College – directing the annual Babson-Kauffman Entrepreneurship research conference as well as managing the US panel study. The two of them – Michael Hay and Bill Bygrave – asked me to consider leading this effort, as the coordinating Principal Investigator.

It was clear this would not be simple, but the basic procedures for locating representative samples of those active in the start-up processes had been worked out for the panel studies and applied across a number of countries. The major issues were selecting countries and finding the teams and money to do the work.

Personal networks were used to locate colleagues interested in the project and a pretest was done with 5 countries in 1998. For the 1999 cycle the plan was to emphasize the G-7 countries as a way to elicit policy-maker interest. It was possible to locate teams in Canada, Japan, Germany, France along with the UK and the US – Italy was subsidized to complete the set. Colleagues in Denmark, Finland, and Israel developed teams to participate. The US Panel Study procedures were modified to emphasize participation in entrepreneurship and cross-national harmonization. Given the funds expended, the result was quite successful and indicated a substantial variation across countries.

Once the findings were released, a number of teams in other countries contacted GEM coordination about participation. A Swedish team organized by Magnus Aronsson and Frederic Delmar of ESPRI joined in 2000; by 2003 39 different teams had been involved and 41 countries had been included in the data collection. Over 60 percent of the world population and over 90 percent of the world GDP [gross domestic product] is represented by these GEM countries. This research program looks very much like a global study.

While the GEM project was initiated by Babson and LBS, it was able to sustain itself and grow from funds and "sweat equity" provided by the National Teams and, for the 1999 through 2003 cycle, substantial support of the Ewing Marion Kauffman Foundation.

The major results – to date – have been nothing short of revolutionary:[2]

• It is now estimated that up to half a billion in the world are actively involved in either the start-up process or managing a new business, one less than 4 years old.

• The range of participation among countries is enormous – from one in 30 to one in four adults.

• About one-third of this massive participation reflects the lack of suitable job opportunities; this necessity entrepreneurship is heavily concentrated in developing countries. Over 80 percent of the effort in advanced countries – as in the EU or North America – reflects volunteers trying to take advantage of new business opportunities.

• Necessity entrepreneurship has higher association with subsequent national economic growth than "opportunity" entrepreneurship.

• Young people and men are more likely to be involved; countries facing a shortage of young adults have the most difficult problems to overcome.

• The relative levels of participation in start-ups are rather stable, the rank order of countries changes very little from year to year – the whole set may shift up and down as the world economy moves up and down.

• By far the largest source of financial support are informal investments; from 5 to 30 times more significant than the venture capital investments in start-ups.

• The proportion of new firms and established firms that are pursing products and services that will change the market place is very small, less than 5 percent.

• The vast majority of all firms – new and established – are replicating existing economic activity; by copying existing firms, new firms increase pressures for producing quality products and keeping prices low – major benefits for the customers.

• Estimates of entrepreneurial activity among established firms suggest it is about one-fifth the level of new firm creation. Most economic change and adaptation will come from new firm creation.

• Levels of participation within countries clearly change, but very slowly; one cannot expect major shifts before the next election whether it is in 2, 4, or 6 years.

• Countries of the world face two different problems:

– Rich countries are marked by an overall shortage of participants in entrepreneurship and a future with declining reservoir of potential candidates; how to overcome these deficiencies and continue to grow is a major challenge.

– Poor countries have high levels of start-up activity, but much of it is not likely to lead to significant firms. Models of start-ups based on rich countries and opportunity entrepreneurship may not be the best model for understanding necessity entrepreneurship. This is an enormous unexplored phenomenon that involves tens of millions of people and new firms.

MAJOR THEMES:

1) Entrepreneurship, new firm creation is a major societal phenomenon – more prevalent than marriage or childbearing – half a billion in the world, compared to 130 million new human births each year.

In 2002 about 70,000 Swedes were involved in 35,000 marriages and another 96,000 were the parents of 48,000 new Swedish babies. Assuming these are all different people, it is a total of 166,000 indi-

[1] Full data sets and documentation can be found at 'http://projects/isr.umich/edu/projects/'.

[2] The major findings are summarized in five global reports prepared from 1999 to 2003 and available at 'www.gemconsortium.org': Reynolds *et al.* 2004, Reynolds *et al.* 2002, Reynolds *et al.* 2001, Reynolds *et al.* 2000 and Reynolds *et al.* 1999.

viduals and 83,000 marriages and births; at the same time, about 223,000 Swedes were involved in about 90,000 firm start-ups or new businesses.

2) New firm creation is a major career option for hundreds of millions.

3) New firms have a major role in economic change and adaptation.

4) We are just now beginning to clarity the outlines of the firm creation process and with it, understanding how to make the process more efficient – to reduce the social costs associated with the churning and turbulence among businesses.

5) An active entrepreneurship sector has major implications for the future development of all countries – whether they are rich or poor.

As one that has made a considerable personal commitment in trying to understand this phenomena – which has required a major investment in assembling the resources and colleagues to implement research projects – I don't see how the outcome could have been any better. It has led to the discovery of massive, heretofore unrecognized, social phenomena of considerable social importance – it has been a fascinating collective adventure.

Finally, I would like to thank my wife – the ever patient Anne-Marie – for putting up with the competition from one of life's most seductive mistresses – a challenging and exciting research program. On behalf of myself and hundreds of colleagues in these various consortia, we are grateful for the recognition of the award. And my adult children – the doctors Christopher and Nicole Reynolds – thank the award committee for the contribution to their parents' retirement fund.

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