THE MARKET FOR ENTREPRENEURS

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ABSTRACT

Current research suggests that entrepreneurship is an essential input to economic growth, however there is a lack of agreement on what resources incent would-be entrepreneurs to enter the market. We therefore surveyed 184 graduating MBA students using an adaptive conjoint instrument to ascertain the resources they would require to start their own new firm rather than accept a job offer with an existing firm. Our investigation enabled us to quantify the utility of a heterogeneous set of resources that included "soft" intangibles (such as a support network) as well as "hard" tangible resources (such as the provision of office space, funding, health insurance, etc.). Our results have implications both for policy makers interested in what incentives are attractive for potential entrepreneurs and for researchers interested in the determinants of new firm creation.

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INTRODUCTION

"[W]ithout entrepreneurs, and without the right incentives for them to devote themselves enthusiastically and tirelessly to commercial use of their innovations, economic progress cannot be counted on and indeed is unlikely to occur… These then – entrepreneurship and appropriate incentives – seem to us… to be indispensible ingredients of any growing economy" Baumol et al. (2007, p. 276).

The pursuit of economic growth provides the major rationale for public policy to support entrepreneurial activities in economies around the globe. Researchers have argued that – subject to survival – new firms account for a large proportion of job and economic growth in the US and other developed economies (Haltiwanger et al., 2010). Others have highlighted that a subset of particularly successful high-growth firms (the kind of firms that appear on the annual INC. 500 list and have been referred to as "gazelles") are responsible for much of the job and wealth creation (Acs et al., 2008). However, despite agreement on the importance of entrepreneurship for economic growth, views among policy researchers on appropriate public policy concerning entrepreneurship remain rather divergent. According to a recent appraisal of these issues by Audretsch et al. (2007), the root of these different opinions about the efficacy of public policy for entrepreneurship is that policy makers lack an intellectual foundation from which to act, although this has not stopped a colorful array of policy interventions. Policy makers have engaged in their own search for appropriate incentive mechanisms that might encourage entrepreneurship, and this process has spawned a veritable mini-industry of advisors, bureaucrats and other players pursuing magic bullets that promote entrepreneurial activity. That search has involved much trial and error, experimentation (Stevenson and Lundstrom, 2007) and failures (such as unsuccessful

efforts at creating new economic clusters (Bresnahan et al., 2001)). In many countries, government support for new businesses is quite extensive. For example, in 2004 more than half of German start-ups were supported by the federal employment agency (Block and Sandner, 2009). However, current differences in opinion on the efficacy of such measures (Parker, 2007) point to the tentative and inconclusive state of current knowledge on the topic, a sure indication that more research is needed.

Surveying the literature examined constructively by Audretsch et al. (2007), even if there is little agreement among policy economists on appropriate public policy for entrepreneurship, indicates that there is a close consensus on the short list of policy elements that are potentially "on the table" for consideration. We capture these in Table I. Following the "Washington consensus" on economic growth in the 1990s (Rodrik, 2007), we will refer to Table I as the "Jena consensus" on public policy related to entrepreneurial activity, named after a collection of researchers associated in some way with the Max Planck Institute in Jena, Berlin, and who are actively involved in researching public policy on entrepreneurship. Most policy economists stress that the elements in Table I highlight policy tools that are applied depending on situational factors (Audretsch et al., 2007). In this sense policy economists appear to have learned a lesson from the "Washington consensus": Universal economic principles get packaged and applied in rather idiosyncratic ways that reflect local economic constraints and needs (Rodrik, 2007).

INSERT TABLE I HERE

On the one hand, Table I presents a thumbnail sketch of rich and diverse policy mechanisms for effecting entrepreneurship; on the other hand, it provides little help in ascertaining the relative efficacy of different policy tools or in assessing trade-offs among these policy variables. This is where the current paper seeks to make a contribution. In this paper we operationalize a number of the variables in Table I in entrepreneur-friendly terms (see column 4 in Table I) and strive to build new knowledge about these variables by studying their perceived efficacy for entrepreneurs. Our focus is on a subset of the variables in Table I that are immediately controllable and which can be manipulated. For this reason we focus on policy variables 1 to 5, rather than variables 6 to 8 (competition policy, bankruptcy arrangements and externality-driven market failures). Our motivation here reflects Baumol et al.'s (2007, p. 122) observation that attributing causation for entrepreneurship primarily to determinants such as culture is deeply depressing for policy makers since this and many other determinants cannot be changed by policy intervention, at least not over the short term. Hence the attractiveness of focusing on policy variables such as financial support, for example, because they potentially provide a determinant of entrepreneurship that *can* be directly manipulated and often with immediate effect.

Our approach to operationalizing and studying these policy tools is to step back and directly ask the practical question: *What resources are needed to persuade an individual with a job in hand to start up a new firm instead?* The desired resources might be tangible (such as financial incentives) or intangible (such as personal support networks). Our approach therefore translates policy variables into resource effects for entrepreneurs. For example, financial support policies can be directly translated into bundles of different kinds of resources (office space, subsidies, loan guarantees) that might incent entrepreneurial behavior. To optimize the

inducements for entrepreneurship, one needs to have a solid understanding of what resources individuals *perceive* as valuable for the venturing process, what the relative utility of these resources is, what other factors systematically impact the way these resources are valued, and the total bundle of resources needed to generate a potential inducement for an incremental new firm to be formed. Our aim is to develop a more nuanced and complete understanding about different baskets of resources that – if provided – would change potential entrepreneurs' intentions about starting a new business (Krueger et al., 2000; Zhao et al., 2010). If we understand this, we can potentially provide policy makers with a better idea about the *relative* attractiveness of the shortlist of available interventions and potentially add newly discovered items in the process. We thus consider policy options from an entrepreneur's perspective – the market side – of the policy equation. And so we phrase our research question more formally as: Is there a market for entrepreneurship and are the different resources that make up this market valued rationally?

This is our starting point in this paper. To better understand these issues, we study the market for entrepreneurs in the same way marketers would study other kinds of markets – from consumer to industrial products to services – by investigating the perceived value of various attributes and levels of those attributes. Marketers have developed sophisticated techniques for assessing the differential value of product and service attributes. In this paper we use an adaptive conjoint analysis technique well established in marketing research and used in several entrepreneurship studies (McKelvie et al., 2009). We sampled 184 graduating MBA students using a web-based adaptive conjoint software tool that dynamically generates a unique question set for every subject based on their previous individual answers. Our assessment and analyses enabled us to quantify the utility of a heterogeneous set of resources that includes the "soft" intangibles alongside "hard" tangible resources. We found statistically significant differences

between the perceived dollar value and the actual economic cost of various tangible resources, and were able to observe the impact of several other variables on the resource valuations of individuals. For example, we identified that an experienced mentor has the highest utility to potential entrepreneurs. In sum, our data and analysis generated a rich set of findings that complement several perspectives of the extant literature.

The paper proceeds with the methods used for the study in the next section, followed by a description of the major study results. The final section discusses the implications of our findings, limitations of the study and future research opportunities.

METHOD

Sample

Our sample was composed of graduating MBA students from two MBA programs in the US. We started by e-mailing 355 students about the survey and received 120 responses. We then sent reminder e-mails about the survey over the following two to three weeks and received 184 responses, representing a response rate of 51.8%. The later subjects showed no systematic biases in their responses.

INSERT TABLE II HERE

The descriptive statistics for our sample are presented in Table II, and indicate that our sample broadly reflects the population of graduating MBAs in the US. Approximately 65% of the sample was aged between 25 and 29 years, 74.3% of the subjects were male, and 61.4% of them were not married. The majority (63.2%) of the subjects had no prior entrepreneurial experience

and had previously worked in a large organization with more than 500 employees (48.5%). The average work experience of our sample was approximately seven years.

In some settings, the use of students as a sample has been criticized since students may not reflect the population of interest for the research question. For our question, quite the reverse is true. Sampling MBAs just prior to graduation provided us with a population of potential entrepreneurs who have high human capital, meaning they represent the class of entrepreneurs that might create high-growth entrepreneurial firms, and are actively thinking about trade-offs in their future employment situations. These characteristics are more important than identifying a subset of people who have already generated ideas for new ventures for two reasons. First, research shows that more than 90% of ventures (Reynolds et al., 2004) do not start with a specific opportunity but are based on the entrepreneur's personal situation (Benz and Frey, 2008) and a rough idea, which may evolve and develop into something more concrete in the course of the venturing process. Second, it enables us to draw implications for how the broader market for entrepreneurs might look beyond those who have already self-selected into it.

Conjoint Analysis

The conjoint approach assumes that individual decisions can be deconstructed into an underlying set of factors of varying importance (Green et al., 2001) and was introduced by Green and Rao in 1971 as a method to elicit consumer preferences and willingness to pay for a product feature. Survey and interview data are plagued with introspective and self-reporting biases (Shepherd and Zacharakis, 2008). In conjoint analysis, we avoid these issues because subjects do not directly indicate preference for different attributes. Instead, subjects face multiple decision scenarios from which we infer the utility or importance of different attributes. A set of hypothetical resources is presented to subjects and, based on previous choices, further questions

are dynamically generated by the adaptive conjoint software. This allows us to examine more variables with fewer questions than full profile or choice-based conjoint methods (Johnson, 1987). Since our research question calls for estimating the perceived value of individual attributes and levels of resources within a differentiated basket of resources that might be necessary or useful to create a new venture, conjoint analysis is a highly appropriate method. In addition, as entrepreneurs require a potentially wide range of resources to start a venture, we use adaptive conjoint analysis in order to obtain the importance rankings of the heterogeneous basket of resources.

Teichert and Shehu (2010) offer a broader view of the use of conjoint analysis in the literature. Their 2010 bibliometric review of the method identified 895 scholarly articles using conjoint analysis shows that application has expanded from marketing into areas from economics (12.5% of studies) to healthcare sciences and policy (15.3% of studies). In 40 years of use, conjoint analysis has seen meaningful refinement, such as the development of adaptive conjoint designs (Green and Srinivasan, 1990), as well significant practical adoption, particularly because it offers a basis for evaluating the psychological trade-offs individuals make when evaluating several attributes together. Specific to our setting, conjoint analysis has successfully been applied to 16 empirical investigations around entrepreneurship (Lohrke et al., 2010), including one studying the likelihood of corporate entrepreneurship (Monsen et al., 2010).

Procedure

Students were contacted by e-mail and invited to participate in an academic research project investigating the resources associated with starting a new venture. The e-mail contained a link to the introduction page of the adaptive conjoint survey, a completely web-based data collection instrument. Since we sought to identify the attractiveness of a basket of different

resource profiles while minimizing the number of questions presented to a subject, the adaptive conjoint questionnaire started with questions to assess the importance of different levels of the same resource. The response to each question was automatically taken into account by the software when the next question was generated. The next set of questions identified the trade-offs between partial resource profiles. Then, subjects were asked to evaluate the likelihood of starting a venture with three different resource profiles (generated based on previous responses) on a 100-point scale. The final set of questions asked the subject to report demographic information. The last page of the questionnaire returned the utilities that each subject placed on a particular resource based on his or her responses. The full instrument took about 20 minutes to complete, and the dropouts, which represented 30.7% of those connecting to the instrument, showed no systematic bias.

The accompanying instructions were designed to control for unobservable effects. The subjects were told in the e-mail and the cover page of the questionnaire that the research project sought to identify the various factors that encourage or discourage entrepreneurship. They were assured that responses would be confidential, were not required for any coursework or evaluation, and that at the end of the survey each subject would receive feedback on their own preferences for resources associated with new venture creation. Subjects were instructed to assume that they had a job in hand. They were then told to consider what it would take for them to pass on this opportunity and start a new venture *immediately* after they graduated.

Independent Variable Attributes and Levels

Using the conjoint survey instrument, we presented subjects with seven different categories of resources, and within each, between three and five levels of each resource. Variable attributes and levels are presented in Table III. These independent variables were presented

individually and in different combinations in order to understand the value subjects placed on each level of each resource and compare values between resources.

INSERT TABLE III HERE

Dependent Variables

We analyze individual independent variable attributes and levels against two different outcomes. One dependent variable in this study was the likelihood of the respondent considering starting a new venture in lieu of taking a job offer with an existing firm. This was measured on a 100-point scale. This measure is analogous to entrepreneurial intent (Reynolds et al., 2004; Zhao et al., 2005). The other dependent variable was the relative attractiveness of a resource and level of that resource. Different resources like health insurance, personal compensation, office space and funding were combined in the adaptive conjoint to create various resource bundles, and subjects were asked to state their preference for a particular combination on a 7-point Likert scale that ranged from “extremely undesirable” to “extremely desirable.” The likelihood and the attractiveness data were combined in order to arrive at the utility or importance of a resource to the subject. Note that a negative utility does not describe a resource that is unattractive but that the resource is less attractive compared to another in the same category.

RESULTS

For each respondent, we calculated utilities for every attribute and level, and an R-square value for the whole observation. We received a total of 184 responses. 11 respondents generated observations that did not explain a significant portion of the individual variance, quantitatively suggested by an R-square value of less than 0.25. We considered these responses invalid and

removed them from our final analysis. Additionally, we removed two cases for which $40,000 in personal compensation was assigned a higher utility than $200,000 and a lower value of health insurance had a higher utility compared to a higher value. The final sample size used for the analysis was 171.

We then computed the actual dollar value of resources that subjects said they would require to switch from a job offer they already had to starting their own firm so that we could compare this value with the perceived dollar value of the resources and against intention. The dollar values for compensation and funding amount were directly presented to subjects in quantitative monetary terms, but for the other tangible resources, such as health insurance, future employment and office space, we computed dollar values. The value of health insurance was derived by looking at various student health plans offered by four different online insurance agencies (all accessed in January 2011) and comparing the amount of money each plan required a student to pay. The results were very similar across basic plans and we were able to derive a mean dollar value of $98 per month for an individual. We extrapolated this value to identify the dollar amount for six months, one year and three years of health insurance. For the future employment guarantee, we calculated dollar values based on the mean initial salary that an MBA graduate expects to receive in her first job, and the average amount of time it takes to find a job. For the first value, we relied on the reported mean starting salaries for MBA graduates at the two universities where we conducted the study, a value of $80,678 per year. To estimate the opportunity cost of lost wages during search time, we averaged the US Bureau of Labor Statistics' reports of the number of weeks job seekers took to find a job for the year that the survey was conducted (2010) to arrive at our value of 27 weeks. Thus our estimate of actual dollar value of a job guarantee was $41,891. We did not account for job search expenses as the

respondents in our population have access to job placement facilities through their universities. Finally, for the office space calculations, we assumed that a start-up requires at least 500 square feet (50 square meters approximately) in order to operate in the United States and therefore we were able to arrive at the dollar value of office space for six months, one year and three years. The cost of 500 square feet of start-up (class B) office space was assumed to be $550 per month (MIT Center for Research, 2010).

To get an overview of the market represented by our sample, we totaled the dollar value of the individual baskets of resources identified through the conjoint survey instrument as critical to intent for each respondent. We then plotted the value of those baskets in Figure 1 by respondent percentile to visualize the distribution. We observe that 18% of the market clears (18% of respondents would engage in entrepreneurship) with a basket of resources costing less than $500,000. The mean basket value is $782,267 and that the last 10% of the market exhibits a steep tail, requiring between $1,192,837 at the 90^{th} percentile and $2,459,187 for the last respondent, in order to engage in entrepreneurship.

INSERT FIGURE I HERE

The perceived dollar value of the "soft" resources was calculated using the utility and the dollar value of personal compensation as the baseline (since this resource category represents the actual amount of dollars that the entrepreneur requires for himself in order to consider entrepreneurship an attractive career option). For each individual, the relative utility of $160,000 ($200,000 – $40,000) of personal compensation was worth 101.8 utilities (the normalized measure of utility generated by the adaptive conjoint software). Therefore, the dollar value of

one utility point is estimated to be $1571. This value was used to monetize the relative utilities of all the other resource categories. For example, the utility of three years of health insurance relative to one month of health insurance was 83.1 utility points and the corresponding dollar difference was estimated as $194,816.

Table III shows raw utility scores from the conjoint data (means and standard deviations). The table breaks the data into the seven categories of resources included in our survey. For compensation, health insurance, future employment, office space and funding amount, we see the pattern of responses we would expect: the ranking of items is consistent, which is reassuring because it offers face validity to the conjoint results.

Next, we considered our respondents' preferences for particular resources, which are rank ordered according to category in Table III. Support and funding were generally considered the most important resources, with office space being the least important. The fact that support tops the list is particularly striking since this variable is the "softest" resource we included in our conjoint tool, yet subjects perceived its value to be on average the highest of all categories we offered. Furthermore, it is notable that the element of support that subjects valued particularly highly was the support of an experienced mentor (Table III), whereas they placed relatively less utility (-43.4) on local chamber of commerce entrepreneur networks. In dollar terms, an experienced mentor is worth $190,628 more to the potential entrepreneur compared to an entrepreneurial network set up by a local chamber of commerce. This contrast is interesting from both a policy and a research perspective. For researchers, the lower utility value that our subjects put on entrepreneurship networks raises questions about the relative importance of the facilitating role of both weak and strong social network ties for entrepreneurial activities (Uzzi, 1997). A possible explanation is that subjects do not perceive much utility in this type of

networking because they see little relationship between it and new venture performance. It may be that our subjects see this particular form of networking as a significant time commitment with little promise of obtaining any benefits that cannot be achieved through other mediums, such as online social networking.

By comparison, subjects consider an experienced mentor as a highly valuable resource. This suggests an important role for knowledgeable advisors in the venturing process. When combined with the networking result, it suggests that entrepreneurs may not like certain kinds of networking but may use them to gain access to an experienced mentor. Schotter (2003) presents a summary of studies that investigate advising in experimental settings and concludes that advice-taking is pervasive among participants in the situations even when advisors are naïve. This implies a connection with the propensity of human beings to seek out and use advice, which is substantially magnified by the presence of advisors with a track record of experience in a field. Access to role models is considered an important element that explains entrepreneurship (Scherer et al., 1991). The advisors in question may include individuals with considerable entrepreneurial experience with a track record of success (Liñán et al., 2011), but we note that lawyers, accountants, angel investors and others who regularly serve the entrepreneurial community often play significant advisory roles in young firms.

The data on funding sources are interesting from several perspectives. If we rank order the preferences expressed in Table III, we obtain a clear picture of the bootstrapping mindset that other researchers have pointed to among potential entrepreneurs (Bhide, 1992). The preferred start-up model involves financing a venture with customer pre-orders (in exchange for equity) or the support of a large firm (a technology commercialization deal). What new ventures most want (and need) is customer orders that generate positive cash flow as fast as possible, thereby

limiting the risk of the venture by reducing the up front investments the entrepreneur needs to make. The behavioral explanation for this is that it keeps the venture at a level of "affordable loss" that is acceptable for the entrepreneur (Dew et al., 2009). For example, we calculate that, for the average respondent in our pool, the monetary worth of the utility of funding from a large firm relative to funding from a bank is worth $75,745. This means that subjects require $75,745 less resources if they receive funding from a large firm willing to help them commercialize the new technology/product, than if they were to secure funding from a bank. One can interpret this preference as the psychological cost of funding an uncertain new business with loans that almost certainly have to be repaid. Bringing that together with the idea of affordable loss, these data may be considered indicators of the risk averseness among our population of MBAs that comes from considering the worst case scenario, and are consistent with psychological studies that indicate no difference between the risk preferences of managers and entrepreneurs (Miner and Raju, 2004).

Further support for the bootstrapping hypothesis and for our respondents' desire to lower their risk of entrepreneurial failure comes from data on the future employment options in Table III. This indicates that subjects significantly value having a job offer or a guarantee of a job. The average dollar value of having a job guarantee relative to having no guaranteed job offers is approximately $141,805. This makes sense in light of recent research on hybrid entrepreneurship (Folta et al., 2010), which involves individuals starting new businesses alongside their wage job. This method of transition is used by a significant share of all entrepreneurs; they start a business at home by initially working nights and weekends. Again, this is attractive because it makes the venture more of an affordable loss for entrepreneurs: They can fund the venture with cash flow from their regular job and, if things do not work out, they simply continue with their regular job.

For the other items in our conjoint survey (personal compensation, funding amount, office space and health insurance), probably the most meaningful insights come from cross-category comparisons and the difference between actual and perceived dollar values which are indicated in Table IV. These items all rank order in the expected way and show a pattern of diminishing returns. However, when we look across them we see some interesting relationships, which we highlight below.

INSERT TABLE IV HERE

The relative utility of the difference between $200,000 and $40,000 of personal compensation is roughly equivalent to the relative utility of switching from $5 million to $100,000 of venture funding. The apparent disparity in attractiveness between $0.16 million and $4.9 million fits with the general pattern of venture capital investing (Hall and Woodward, 2009) in which entrepreneurs receive a relatively modest salary and the (unlikely) potential upside of a large jackpot if the venture capital funding (this may be many millions of dollars) pays off. Therefore, one (the salary) is certain, whereas the other (the investment) has a stochastic payoff for the entrepreneur; to our subjects these were ranked as roughly similar. This hypothesis is further strengthened when we compare the actual and perceived value of venture capital funding. The perceived dollar value of funding a $5 million dollar venture relative to a $100,000 dollar venture is only $282,179. This indicates that the average individual is probably factoring in the stochastic nature of the payoff, which in turn considerably reduces the value of the resource.

The cross-category comparisons of three years of health coverage relative to one month of health coverage and three years of free office space relative to six months of free office space

are also roughly comparable, indicating that our subjects see these as being of like value. The results for office space are interesting for policy makers because many local and regional initiatives to incubate new businesses involve the provision of free or subsidized facilities for a period of time. Our results tend to support the perception that the availability of this resource is attractive to potential entrepreneurs, though we do not examine comparisons between local authorities, private and university incubators.

The perceived dollar values of health insurance, job guarantees and free office space are higher than the actual dollar values. The difference between the dollar value of three years (relative to one month) of health insurance and its actual dollar value of health insurance is the highest ($191,351), indicating that it is very attractive to provide health insurance to potential entrepreneurs since it is inexpensive to provide yet highly valued. Our results for healthcare are timely considering recent policy changes on healthcare in the US. Our subjects' responses on the utility of healthcare insurance may be explained in a number of ways, including the fact that our sample is from the US and recent public debates may have primed our subjects and made them particularly sensitive to healthcare provision. In one study of healthcare insurance portability, Holtz-Eakin et al. (1996) were not able to reach any conclusive result regarding the impact of healthcare insurance portability on the probability of individuals becoming entrepreneurs. Our data do not speak to portability, but Table III does indicate that our subjects attached considerable value to longer term health insurance (for example, three years' worth) and that this might provide policymakers (local, for example) with a significant incentive tool for enticing more start-ups – a tool that has seen limited use to date.

Potential Limitations

The type of conjoint survey employed here is a robust, well-proven methodology, but it is inherently limited in scope and granularity by the time-availability of participants. As the conjoint instrument increases in either scope or depth, the number of combinations of choices presented to subjects rises exponentially. As a result, the researcher has to settle for a more limited set of questions than may be ideally desired (Sawtooth Software Inc., 2007). Therefore, the attribute categories and levels could be incomplete, and there might be unmeasured variables that account for a meaningful part of the unexplained variance in our results. Furthermore, conjoint assumes that utilities are linear, which implies that the decision rule is compensatory – i.e., the subject can make trade-offs between features and is able to make a choice of one set of attributes over "n" others (Gilbride et al., 2004).

Additionally, collecting data via adaptive conjoint is hypothetical from the subjects' point of view. It may have limited correlation with what they would actually do when faced with the same question in the real world (Huber, Wittink, Johnson and Miller, 1992). This limitation – the issue of espoused versus revealed preferences – is one that, while objected to in the *principle* of economic research, is often employed in the *practice* of it. We let these limitations suggest fruitful avenues for future research that might refine our findings with alternative methods. Even considering these limitations, we found adaptive conjoint the best approach to address our question since it requires an understanding of trade-offs and choices when a large number of attributes and levels are present.

Finally, the sample suggests potential questions about generalizability. As unique as graduating MBA students may or may not be, this presents a significant future research opportunity using alternative samples of individuals such as undergraduates, high school students, experienced workers, the unemployed, etc. Cross-country comparison groups are

another potential area for research, perhaps by base-lining resources according to PPP (purchasing power parity). We hope that future research takes up this opportunity, and we are happy to make our instrument available for such investigations.

DISCUSSION AND CONCLUSIONS

For entrepreneurship policy researchers, our findings suggest several important implications for the "Jena consensus" on policy variables that we highlighted in Table I. To begin, our data and analysis confirm the value of two resources already commonly offered to nurture new firms: the provision of office space (incubators) and access to various kinds of financial support via a wide range of policy-supported mechanisms. We are not suggesting that these subsidies ought to be made more readily available, merely that our research results confirm the attractiveness of these incentives for would-be entrepreneurs.

However, our work also generates some surprises with regard to the perceived relative value of other policy elements in Table I. The value of jobs is a good example since it points out that labor market policy and conditions are worthy of further research. Our data clearly indicate that jobs are incentives for entrepreneurship, not in the sense usually thought, but rather that having a job increases the likelihood of starting a new venture. This result further supports the need to examine hybrid entrepreneurship, which a number of studies have already pointed to as an emerging research topic. Around 50% of nascent entrepreneurs are hybrids (Reynolds et al., 2004). However, though research indicates that hybrid entry is consistent with real options logic, we know much less about the behavioral factors involved that appear to make part-time entrepreneurship such an attractive choice. We also know next to nothing about the consequences of part-time "dabbling" in entrepreneurship in terms of individuals' job prospects, the performance of the firms they found, and economic productivity.

Next, the high value of entrepreneurial mentoring and advisement emerges as a key and important theme in our results for entrepreneurship policy. This speaks to policy making in entrepreneurial education, albeit a specific area that to date appears to have been understudied. The availability of mentors is of significant economic value, particularly to those concerned about their own entrepreneurial skills. This also raises several interesting theoretical issues regarding the matching of entrepreneurs with appropriate advisors (Roth, 2007), such as angel investors, since advisement tends to be a key role of such early stage investors. Research has predominantly ignored these types of issues, taking a "cold" view of the investor selection process, for example. But our results suggest that there may be a case for examining both the economic benefits of advising and the "warmer/softer" side of investment behavior (what makes for beneficial investor–entrepreneur advising relationships, how advice is best used, etc.), so that researchers can better understand the impact advisory activity has on who starts new firms, the shape of those firms and the consequences for those firms. We believe that our research also casts light on the value of entrepreneurship "networking" events that a variety of institutions encourage and engage in; a key goal of these activities should be to connect and match mentors and mentees. Beyond this, our findings suggest these events are not perceived as valuable to would-be entrepreneurs.

A further set of implications emerge from our findings on the perceived value of healthcare benefits to entrepreneurs. This speaks to policy in the social security arena. This resource might be a useful incentive mechanism for entrepreneurship, one that can be employed by central and local authorities alike. Healthcare insurance may have a role in this because it is clearly attractive in terms of its inflated perceived value to entrepreneurs and the relatively low cost of providing it compared to other policy interventions.

The broader implication of our study for policy researchers is that conjoint analysis offers a method for examining preferences of a particular set of individuals in order to determine a bundle of resources that can be provided most cost-effectively to incent those individuals to enter entrepreneurship. The finding of quantitative differences between actual and perceived monetary values of the different resources provides arbitrage opportunities for policy makers to intervene to increase entrepreneurial entry in particular locales, categories and demographic groups. We hope that this research will encourage further specification of the character of the market for entrepreneurs – a market that provides a critical feedstock to every variety of market in the business landscape.

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Figure 1 – Distribution of the Market for Entrepreneurs

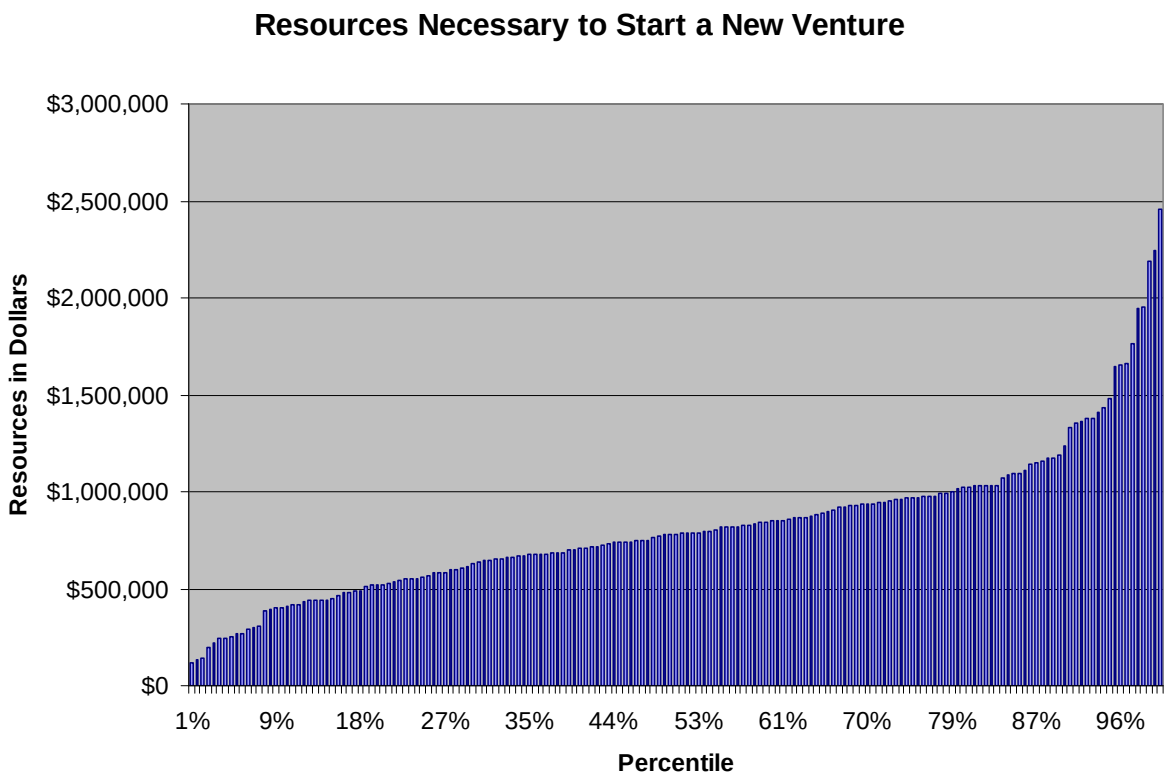

Table I – Public Policy for Entrepreneurship: Summary

#	Policy variable	Description	Literature	Related variables operationalized in this study
1	Credit rationing / financial support	Small business access to capital, loans, subsidies, grants, loan guarantees; availability of specialized angel and venture capital financing sources	Cressy, 1995; Fazzari et al. 1988; Holtz-Eakin et al., 1994; Parker, 2007	Yes: Start-up loans, entrepreneur salary, office space
2	Entrepreneurship education	Availability of information, awareness and preparation for becoming an entrepreneur	Van der Kuip and Verheul, 2003; Zhao et al., 2005	Yes: mentoring, network support
3	Social security arrangements	Availability of unemployment, healthcare, disability and retirement benefits	Holtz-Eakin et al., 1996; Henrekson and Roine, 2007	Yes: Healthcare benefits
4	Labor market policy	Labor market regulations, conditions and options; re-employment policy	Evans and Leighton, 1989; Storey, 1991; Audretsch et al. 2005	Yes: Future job availability
5	R&D / technology transfer policy	Subsidies and support for small firm R&D and technology transfer, i.e. from universities, SBIR	Link, 2007; Wessner, 2007; Siegel, 2007	Yes: Customer relationships, large firm partners
6	Competition policy	Macro economic policy regarding taxation, IP protection, administration ("red tape"), product/ labor/ market regulation	Holtz-Eakin 2000; Brock and Evans 1986; Audretsch et al., 2007; Parker, 2007	No
7	Bankruptcy arrangements	Social stigma of failure; legal and financial status of failed entrepreneurs; risk-taking attitudes	Lee et al., 2007; Landier 2005; Bengtsson, 2005; Zhao et al., 2010	No
8	Externality-driven market failures	Network clustering, knowledge spillovers and learning externalities	Bresnahan et al., 2001; Feldman and Audretsch, 1999; Martin and Scott, 2000; Auwerswald, 2007	No

Table II - Descriptive Statistics

Variable	Percentage or Mean Value
Age (years)	
Younger than 20	0.6
20 to 24	1.8
25 to 29	64.9
30 to 34	25.2
35 to 40	7.6
40 and above	0
Gender	
Female	25.7
Male	74.3
Highest degree received	
None	0.6
Masters	25.2
Doctoral	24
High school	0
Undergraduate	50.3
Marital status	
Married	38.6
Not married	61.4
Number of children	1.2
Parents with entrepreneurial experience	
Neither	63.2
Mother	4.7
Father	25.2
Both	7
Work experience (years)	6.98
Type of firm the subject predominantly worked in	
Worked for the government	22.2
Large corporation (more than 500 employees)	48.5
Medium-sized corporation (between 100 and 500 employees)	11.1
Small corporation (between 100 and 10 employees)	15.2
Very small corporation (< 10 employees)	2.9
Current employment status	
Have a job lined up	55
Still looking for a job	36.8
Working on own new venture	8.2

Table III - Utilities of Measured Resource Attributes and Levels

Resource Attribute*	Level of Attribute	Average Utility**	Std. Dev.
Support (Attribute Utility: 17.7, SD: 8.8)	A reliable supplier that can deliver to your specifications	2.2	42.7
	Your spouse's/family's encouragement	5.5	53.6
	An experienced mentor to help you with things you do not know	37.9	38.1
	A colleague within a client firm interested in co-developing an offering with you	-2.3	43.1
	An entrepreneur network run by the local chamber of commerce	-43.4	40.6
Funding (Attribute Utility: 16.5, SD: 9.9)	$100,000 of initial venture funding	-58.6	36.2
	$1 million of initial venture funding	1.9	15.3
	$5 million of initial venture funding	56.7	34.6
Funding source (Attribute Utility: 14.6, SD: 7.3)	Initial funding comes from a large firm (you help them to commercialize their technology)	3.9	47.6
	Initial funding comes from a bank (a loan to be repaid with interest)	-13	50
	Initial funding comes from a client that pre-orders (in exchange for 30% ownership in the venture)	13.7	42.1
	Initial funding comes from an investment fund (in exchange for 30% ownership in the venture)	-4.6	37.2
Personal compensation (Attribute Utility: 14.6, SD: 8.0)	$40,000 in personal compensation during your first year	-51.5	28.9
	$90,000 in personal compensation during your first year	1.3	13.2
	$200,000 in personal compensation during your first year	50.3	29.1
Future employment (Attribute Utility: 12.9, SD: 6.9)	I had a job offer which would be waiting for me if the venture doesn't work	17.9	26.9
	I would have a guarantee of a job offer at an appropriate level for me if the venture doesn't work	26.1	27.8
	I would find my own next job if the venture doesn't work	-44	41.5
Health insurance (Attribute Utility: 12.8, SD: 6.2)	1 month of health coverage	-40.8	26.7
	6 months of health coverage	-14.5	21.1
	1 year of health coverage	13	18.7
	3 years of health coverage	42.3	23.2
Office space (Attribute Utility: 10.9, SD: 4.5)	6 months of free office space (sufficient for the needs of the venture)	-36.5	16.5
	1 year of free office space (sufficient for the needs of the venture)	-1.3	12.7
	3 years of free office space (sufficient for the needs of the	37.8	16.9

	venture)				

* The utility reported with the attribute is the utility for the attribute category as a whole.
** Attribute level utilities are reported in zero-centered differences format.

Table IV - Actual and Perceived Dollar Values

Resource	Actual Dollar Value (A)	Perceived Dollar Value (P)	Difference (P-A) dollars
Health Insurance (relative to 1 month)			
6 months	495	64,321	63,826
1 year	1089	125,498	124,409
3 years	3465	194,816	191,351
Job Guarantee (relative to finding your own job)			
	41,891	141,805	99,916
Office Space (relative to 6 months)			
1 year	3300	86,633	83,333
3 years	16,500	173,573	157,073
Funding (relative to $100,000)			
1 million	900,000	146,487	-753,513
5 million	4,900,000	282,179	-4,617,821