Pre-startup planning sophistication and its impact an new venture performance in Germany

Schulte, Reinhard

Published in:
ICSB World Conference 2007

Publication date:
2007

Document Version
Peer reviewed version

Schulte, R.: Pre-Startup Planning Sophistication and its Impact on New Venture Performance in Germany, in: International Council for Small Business (Hrsg.): ICSB World Conference 2007, Turku 2007, S. 295:1-20.

PRE-STARTUP PLANNING SOPHISTICATION AND ITS IMPACT ON NEW VENTURE PERFORMANCE IN GERMANY

Reinhard Schulte
Leuphana University Lueneburg
Scharnhorststr. 1, 21335 Lueneburg, Germany
Tel. +49 +4131 677 2164, Fax +49 +4131 677 2158
Email: schulte@uni-lueneburg.de

ABSTRACT

Strategic Management theory suggests effective business planning to be an important requirement for successful start ups. However, little research has been done referring to real business plans made by entrepreneurs. Prior research is based solely on interviews with persons who founded new ventures formerly and does not examine written business plans itself. Moreover, relatively few examinations focus on start ups. The vast majority of empirical work on the planning-performance-link targets established enterprises. All in all, the level of knowledge seems to be quite marginal. This may be caused by some deficiencies associated with prior research on initial business planning. Apart from survivorship bias, limited geographic or industry coverage and an accidental lack of empirical testing, an important deficiency is the interview bias: Performance studies on start ups necessarily depend on an individual recollection of past events when not designed longitudinally. When looking on the later performance of a newly founded enterprise, an interviews approach therefore apparently is biased by selective perception, selective answering, and selective recollection of the past planning behaviour. Those retrospective approaches are thus inappropriate.

The objective of this study is to analyze the relationship of planning sophistication and performance of start ups in Germany referring to real business plans. The study investigates planning practices as a determinant of new venture performance. Utilizing files of a well established German start up panel it uses a survey that reduces the distorting effects of survivorship and interview bias. This research design avoids the numerous problems of retrospective approaches. The paper intends to present some findings of an examination of written business plans.

It could be found that initial business planning sophistication has a very small impact on performance and is limited at most to the profit and loss planning depth. It finds that initial business planning is rather a hygiene factor than a determining issue concerning performance. Furthermore, one can see that profit and loss planning is the most elaborate area of initial business planning and is executed far more intensely than financial planning. Staff and marketing planning on the other hand are handled as very less important planning topics.

Theory and some parts of the literature let assume that planning *per se* makes sense. Some studies confirmed that planners perform better than non-planners or that accurate planning outperforms less sophisticated planning activities. This study is not meant to doubt this interrelation. But concerning performance, we now can conclude that planning is rather a hygiene factor than a determining issue in a way that planning elaboration resp. raised planning depth could increase performance. In other words: Initial planning is an important requirement of success, but cannot lift it, until certain minimum constraints are met.

1. INTRODUCTION

Surprisingly little empirical work has been examined the relationship between planning sophistication and performance in new ventures. The present study reports the results of a survey of initial business plans made by entrepreneurs, whose enterprises have been monitored within the start up panel of Northrhine-Westphalia since the year 2000. This paper seeks to determine the planning behaviour of entrepreneurs, the grade of their planning sophistication, and the performance effects of planning features.

Reflections on new venture planning are spread quite widely in the academic entrepreneurship literature (e.g. Diochon – Menzies - Gasse 2005, Hisrich – Peters - Sheperd 2005, Kuratko - Hodgetts 2004, Timmons 2003, Dollinger 2003, Hormozi et al 2002, Mugler 1998, Pleschak - Werner 1998, Ripsas 1997, Olson - Bokor 1995, Risseeuw - Masurel 1994, Carter et al 1994, Unni 1984), as well as in how-to-do books and papers for practitioners (e.g. McKeever 2005, Hebig 2004, Dowling 2002, Gruber – Elsenmüller – Fischer - Grampp 2002). The literature strongly supports the argument that planning is a key issue for start ups and that a lack of planning leads to a poor performance of young enterprises. However, some authors even argue that planning delivers only few advantage to new small businesses (Carter – Gardner - Reynolds 1996). Moreover, theoretical linkages between planning sophistication and performance in new ventures were hardly delineated (Castrogiovanni 1996), and only few empirical work has been done on this topic.

Brüderl, Preisendörfer, and Ziegler (1992, 1998) as well as Jungbauer-Gans and Preisendörfer (1991) inspected the time invested by entrepreneurs for planning activities and the frequency of written business plans. Planning activities exposed no significant effect on survival and growth (in employees), but on growth in gross revenue. Klandt, Kirchhoff-Kestel, and Struck (1998) investigated the frequency and partitioning of written quantitative business plans of government-supported start ups with interviews. They found no substantial effect on gross revenue per capita. Lussier (1996) examined a small sample of start ups in the retail industry, finding accurate planning to be a relevant cause explaining survival. Rüggeberg (1997) analyzed surviving technology start ups with a retrospective questionnaire. He reports start-up

planning to some extent (concerning a commercialization plan and a customer requirements analysis) to have significant impacts on turnover and goal attainment. Pleschak and Werner (1998) examined by interview the circumstances of development of initial business plans within a sample of government-supported technology start ups. They concluded that the application for financial support initiates planning processes and affects the quality of business plans. Lumpkin, Shrader, and Hills (1998) examined the planning behaviour and the perception of success. They concluded that preparing financial projections is positively related to profitability. Schutjens and Wever (2000) tested a sample of Dutch business starters. They concluded that thoroughly prepared entrepreneurs in means of making a business plan more often realize growth in employees and turnover. Honig and Karlsson (2004, 2001) enquired the planning behaviour of nascent entrepreneurs in Sweden and their individual perception of their business success. They found no evidence for a positive correlation between planning and performance. But Matthews and Human (2000) indicated that perception of success is problematic for the use as a measuring technique for business success, because it cannot be separated from expectations and is biased therefore. They delineated how business plan formalization affects the expectation of growth in new businesses: More formal business plans lower the expectation of growth. Kraus and Schwarz (2007) showed that pre-start-up planning leads to ongoing planning in small austrian businesses, and that the existence of written business plans is beneficial for company success.

In an early work on strategic planning in enterprises based on new technology Roberts (1983) identifies strategic planning deficiencies in a lack of emphasis on economic performance, an inadequate analysis of the economic and the technical environment, an inadequate perception of competitors, and a too broad business approach with an inappropriate multiple product line. Functional planning deficiencies were found in lacking marketing planning, management team planning, R&D planning, and financial planning. Spitzer, Alpar, and Hills (1989) show that using external financial sources highly correlates with making formal plans in new technology based enterprises. Entrepreneurs who use external financing therefore exhibit a greater propensity to develop formal business plans than those entrepreneurs not using these sources.

This research area does not seem to be pretty well explored. Widening the perspective to (strategic) planning in already existing small businesses, what is supposed to be a roughly comparable context, there are a lot more studies available. Some of them already highlighted the correlation between planning and performance: Jones (1982) detected planning businesses to be more successful in terms of return on assets than nonplanning businesses. Bracker and Pearson (1986) identified different levels of performance to be associated with different levels of planning. Bracker, Keats, and Pearson (1988) found that structured planning procedures outperform businesses with nonstructured planning procedures. Rue and Ibrahim (1998) found the overall planning sophistication to be a possible determining factor for growth rates in sales, but not for subjective organizational performance or return on investment. Berry (1998) found out that strategic planning in british small high tech companies fostered their long term growth. In young dutch businesses, success leads to increasing planning activities, promoting further success (Gelderen - Frese 1998). Perry (2001), describing very little formal planning in US small businesses, deduced that non-failed businesses do more planning than similar failed businesses did prior to failure. Lussier and Pfeiffer (2001) stated accurate planning to be relevant for survival in small businesses in Croatia, in accordance to Delmar and Shane (2003, 2004), who later found planning in young swedish SMEs to increase survival rates. Based on a longituidinal analysis, Gibson and Cassar (2005) confirm a relationship between planning activity and performance in small businesses, pointing out that planning is more likely after a time of growth, whereas planning in turn promotes subsequent performance. Yusuf and Saffu (2005) found that planning SMEs outperform nonplanners only in the manufacturimg sector.

Ackelsberg and Arlow (1985) concluded that although planning improves performance, formalization of the plan does not affect it. Robinson and Pearce (1983) found performance of small US banks not to benefit yet from highly formalized strategic planning processes and extensive written documentation, as well as Gable and Topol (1987), who found nor planning-performance relationship for small retail businesses.

In a meta analysis containing large and mature companies as well as small businesses, Boyd (1991) reports earnings growth, sales growth, and return on investment to

benefit modestly from planning activities. The meta analysis by Schwenk and Shrader (1993) led to similar findings.

Rauch and Frese (1998) as well as Van Gelderen, Frese, and Thurik (2000) found a positive relationship between the the detailedness of planning and the realization of owner goals. This relationship is moderated by uncertainty and environmental hostility. Rauch, Frese, and Sonnentag (2000) complemented the relevance of cultural differences as moderating influences on this relationship. Van Gelderen, Frese, and Ombach (2000), using a psychological approach to investigate action strategies of small business owners (see Rauch - Frese 2000, Van Gelderen and Frese 1998), distinguished between different strategic planning variants in small businesses. They found a reactive strategy to be negatively related to the achievement of goals of the business owners, while a strategy focussing on the most crucial issues (critical point strategy) is positively related.

To summarize what has been done yet:

- Relatively few examinations focus on start ups (Kraus - Schwarz 2007). The vast majority of empirical work on the planning-performance-link targets established enterprises.
- Empirical studies targeting start ups off and on expose modest hints for the assumption that planning sophistication promotes performance. However, by now there has been no substantial empirical evidence that holds for unfailing levels of significance.

All in all, the level of knowledge seems to be quite marginal. This may be caused by some deficiencies associated with prior research on initial business planning. Apart from limited geographic or industry coverage and an accidental lack of empirical testing, these deficiencies are particularly the following two:

- Survivorship bias: The exclusion of failed enterprises from performance studies due to the fact that they no longer exist biases (resp. overestimates) performance, because only companies which were successful enough to survive until the end of the period are included. To avoid this bias, a longitudinal research design is required.

- Interview bias: Performance studies on start ups necessarily depend on an individual recollection of past events when not designed longitudinally. When looking on the later performance of a newly founded enterprise, an interviews approach therefore apparently is biased by selective perception, selective answering, and selective recollection of the past planning behaviour. Those retrospective approaches are thus inappropriate.

The objective of this study is to analyze the relationship of planning sophistication and performance of start ups in Germany referring to real business plans. This research design avoids the numerous problems of retrospective approaches.

2. DATA AND METHODOLOGY

Variable set

This paper uses data collected by the start up-Panel Northrhine-Westphalia (NRW) (Schulte 2002, Schulte 2001). The panel which has been run by the author since 2000, undergoes its sixth wave of observation in 2005. Until 2005, it has monitored more than 10,000 start ups belonging to the crafts business sector. This sector can be viewed as typical for entrepreneurial activities in Germany in terms of sizes, business models, legal types, and other (Schulte 2002). The panel covers start ups as well as successions and active participations in existing businesses, and contains solely full time entrepreneurship. The core elements of the start up-Panel NRW are standardized written interviews conducted periodically, which allow a long time monitoring of a high quantity of entrepreneurs and their new enterprises. The start-up panel NRW excludes survivorship bias. Because all included start ups have been monitored through government authorities ("Landes-Gewerbeförderungsstelle"), no hidden exit is possible. Furthermore, all exits could be verified by way of a special crafts register ("Handwerksrolle") if required, where all entries and exits have to be recorded.

These regular panel examinations were accompanied by an extra enterprise data base with detailed business information, and some examinations placed aside the panel waves. One of the latter is an evaluation of 585 randomly selected initial business plans of the monitored enterprises which were made for financial acquisition purposes before starting the business. These written business plans were examined by a

document analysis. It ist to point out here that data concerning planning activities is not collected by interviews, but by analyzing the written documents.to avoid the interview biases mentioned above. Apart from this methodological aspect, this is a matter of content: Following assumptions of Baker, Addams, and Davis (1993), who regard formal written plans as more effective for promoting critical thinking and decision support, we refer to the real paper documents rather than to interview answers.

The investigation intended combines data from the enterprise data base with specific variables taken from panel waves and the document analysis of the initial business plans. The following depiction outlines die selection of the independent, dependent and control variables used.

The enterprise data base provides information about the age of the enterprise and the gender of the entrepreneur. If planning effects exist, they possibly fade with time. Assuming that start up teams provide a broader set of competencies, we also carry out control for the number of entrepreneurial persons involved (team), which is delivered by the data base, too.

The predominant part of the data is provided by a document analysis of initial business plans that detects information about the topics person, employment, support, finance, and marketing. It provides not only information about the capital raised when starting the business (start up size in money) and the start up-size (persons in t=0 including the entrepreneur), but also includes some variables that can be taken as indicators of the planning depth of new ventures. Following suggestions of Castrogiovanni (1996), this paper decomposes the degree of planning into variables distinguishing between different topics of the initial business plan. These topics were subject to the document analysis of initial business plans.

The panel waves were used for data about the size of the enterprises at the time of investigation and the annual performance derived thereout (for construction of dependent variable see below). Moreover, they deliver the variables “Financing problems mentioned” and “Financial consulting needs (pre start up)”. Assuming that financing problems mentioned when starting the business indicate a necessity for

external capital, and the need for external money prompt entrepreneurs to make a more refined written business plan, we include the variable “Financing problems mentioned”. Moreover, we assume that entrepreneurs needing financial consulting are less sophisticated in financial planning affairs and include the corresponding variable, too.

To validate this content induced arrangement of ten planning indicators (1. capital requirements plan, 2. investment plan, 3. financial plan, 4. turnover plan, 5. profit & loss plan, 6. duties of staff plan, 7. ability of staff plan, 8. perception of competitors, 9. estimation of market volume, 10. target group definition), the variables were tested for intercorrelations. To give them a similar structure, all indicators were recoded binary (1=true, 0=false). Within the three groups `financial planning` (# 1-5), `staff planning` (#6-7), and `marketing planning` (#8-10), all recoded indicators showed highly significant correlation. Therefore a reduction of the quantity of indicators with a factor analysis seemed to be useful, because this not only facilitates the interpretation and handling of the phenomena in a multivariate setting, but also tests for the adequacy of the thematic connections made above.

The factor analyses induced two important modifications of the variables set relevant for the measurement of planning depth: Firstly, the financial planning group has to be modified, because no single factor can adequately represent the phenomenon. Rather two important components could be identified. While the indicators Capital requirements plan, Investment plan, and Financial plan highly correlate with component 1, Turnover plan and Profit & loss plan clearly correspond with component 2. So the financial planning group has to be divided in two parts, which we will call “Financial planning depth” (factor 1) and “Profit and Loss planning depth”(factor 2). These two aspects could be explicated clearly and provided high explanation rates for variance (74 % and 91 %).

Secondly, the marketing planning group has to be modified, because “Target group definition” were too peculiar for a single factor solution and were therefore suppressed. The factor described as Marketing planning depth was limited thus to the indicators “Perception of competitors” and "Estimation of market volume” (80 % of variance explained).

Concerning the Staff planning depth no modifications were necessary, so the indicators "Duties" and "Ability of staff" could be utilized (76 % of variance explained). This leads to four latent variables specifically describing the planning depth of start ups:

TABLE 1 Latent variables and related indicators

Latent variable	Related indicators
Financial planning depth	Capital requirements plan
	Investment plan
	Financial plan
Profit and Loss planning depth	Turnover plan
	Profit & loss plan
Staff planning depth	Duties of staff
	Ability of staff
Marketing planning depth	Perception of competitors
	Estimation of market volume

The planning depth variables are characterized by the following distributions (standardized, with positive figures indicating deeper planning activities).

TABLE 2 Planning depth dimensions

	n	Ø	Std.dev.	Std. err.	25 % Quart.	Med.	75 % Quart.
Financial planning depth	585	0	1	0,04	-1,23	0,31	1,10
Profit and Loss planning depth	585	0	1	0,04	0,50	0,50	0,50
Staff planning depth	585	0	1	0,04	-0,75	-0,75	0,42
Marketing planning depth	585	0	1	0,04	-0,83	-0,83	1,51

Analyzing subgroups of this sample reveals some interesting differences in their planning behaviour: Women did a significantly deeper marketing planning than men (marketing planning depth 0,31 versus –0,05 with men, F= 10,1**, $\alpha<0,01$). Compared to successions and active participations as alternative types of professional independence within existing businesses, start ups show a less sophisticated Staff planning depth (start ups –0,11 versus 0,14 with successions / active participations, F= 7,7**, $\alpha<0,01$). Apparently, defining duties and competences in a new venture setting is more difficult than in an existing business with an established employment configuration. On the other hand, start ups more often did a profit and loss planning,

resulting in higher scores for the profit and loss planning depth (start ups 0,10 versus –0,13 with successions / active participations, F= 9,8**, α<0,01).

Focussing on start ups, from this point on we solely examine start ups joining the panel waves that provide the required variables (see above). In consequence, 242 cases were available. Referring to the aims of this paper mentioned above, some findings describing the planning behaviour of the responsible entrepreneurs, respectively the grade of their planning sophistication should be presented at first. Second, the performance effects of planning features have to be examined.

Defining performance in a start up context is not trivial. The literature mentioned in section 1 of this paper suggests a wide range of measurements of success, including methods biased by individual perceptions. One can assume that the determinants of success inspected there are not independent from the selection of a specific measurement. So it is necessary to choose an operationalization carefully and with respect to the requested findings. Based on theoretical results of prior work of the author, that gives reason why increase in company size is a rationale goal for entrepreneurs in the early expansion phase, start up performance can be defined as an expansion in size in a given period of time (for details see Schulte 2004), whereas size can be quantified as the number of people working for the enterprise, including the entrepreneur. To make things operable and commensurable between different enterprises, performance is defined by

$$P = \sqrt[age]{\frac{employees_T}{employees_{t=0}}} - 1$$

where t=0 stands for the moment of starting the business, and T for the last time of observation. age expresses the age of the enterprise [in years]. Hence, P describes a periodic rate of growth in employment, including the entrepreneur.

Sample description

The following table summarizes the features of the data gathered for this paper.

TABLE 3 Descriptive Statistics

	# Cases	Source*	Mean	Std. dev.
Age of enterprise (years)	242	e	3,74	1,34
Male (yes=1)	242	e	,897	,305
Team (yes=1)	242	e	,178	,383
Financing problems mentioned (yes=1)	242	w	,335	,473
Financial consulting needs (pre start up) (yes=1)	154	w	,175	,381
annual performance P	227	w	,223	,300
size at time of investigation (persons in t=T)	236	w	4,83	3,37
start up-size (persons in t=0)	233	d	1,41	1,45
start up-size (money, in T€)	104	d	64,94	86,75
Financial planning depth	242	d	-,033	1,006
Profit and Loss planning depth	242	d	,107	,920
Staff planning depth	242	d	-,109	,944
Marketing planning depth	242	d	,004	,999

** e: enterprise data base - w: panel waves - d: document analysis*

As the table shows, the sample contains micro ventures employing 4.8 people including the entrepreneur(s). These very young enterprises, aged 3.7 years on the average, grow at an intermediate rate of 22.3 % a year. The growth rates decline with age and usually attain a maximum in the first year of business. When starting, the entrepreneurs typically employ less than one person. The amount of money supplied for the start up equals 65,000 € on average. As described above, the table again shows that start ups did a less sophisticated planning on staff, but a more elaborate planning on profit and loss.

To spotlight some of the background facts of their planning behaviour, some characteristic details can be revealed: 52 % of the business plans expose a capital requirements plan, 55 % an investment plan, and 43 % a financial plan. In comparison to the recommendations in the literature, in which these elements of a business plan are identified as quite important for every start up, these figures are mediocre. The profit and loss sector of initial business planning is a lot more elaborate. 87 % of the business plans contain a gross revenue plan, 84 % a profit & loss plan. Apparently, the exposure of profit opportunities and of a potential success of the venture is viewed as a meaningful matter in business planning.

The planning behaviour in the staff sector extremely contrasts these figures. Only 17 % of the business plans indicate intended duties of the employees, 34 % indicate required abilities of the staff, though all of these young enterprises had to recruit personnel in the near future following the start up. Turning finally to the marketing sector, a similar low planning level could be identified. 37 % of the business plans show a perception of competitors, 34 % of them comprise an estimation of the relevant market volume. Only 15 % of the business plans portray the target group of the business model.

Hypothesis

The examination follows the assumption that start-up planning supports the realization of a better performance in the early expansion stage of new businesses. This could be justified with potential benefits in efficiency, acquisition, and learning.

Efficiency gains are possible, because an initial business plan ensures consistence of the concept itself and discloses some potential problems in advance. It provides coherence of all relevant start-up activities, because it gives operational support within a jungle of single decisions to be made in the expansion phase.

Acquisition benefits result from the transfer of information to the stakeholders. It meets institutional expectations of investors. This leads to a decrease of information asymmetries. An initial business plan legitimates entrepreneurs and supports the attainment of trust.

Learning benefits are possible, because formal planning incorporates learning effects. The planning individuals have to gather and process information about target groups, markets, the business itself, and so on. So formal planning reduces uncertainty and leads to the acquisition of relevant knowledge.

Analysis procedure

The examination will be carried out in three parts. At first, the impact of the control variables on planning depth will be tested to enlighten the planning behaviour of entrepreneurs more deeply. Second, a correlation analysis of start up performance and the four different planning depths will be executed. Finally, a multivariate regression

model with performance as a dependent will be computed. The underlying hypothesis is "Planning sophistication promotes performance" and can be divided into the four dimensions of planning depth derived above. Assuming sophisticated planning to be a key issue for the success of start ups, planning sophistication should induce sizable effects on performance, because elaborate plans improve orientation and ease navigation in early development stages of an enterprise. Furthermore, sophisticated plans are more persuasive and can relieve capital acquisition accordingly.

The following table outlines the structure of the variables used in the following regression modelling.

TABLE 4 Organization of variables

Independent variables	Dependent variable	Control variables
Financial planning depth	Performance	Age of enterprise (years)
Profit and Loss planning depth		Male (yes=1)
Staff planning depth		Team (yes=1)
Marketing planning depth		Start up-size (persons in t=0)
		Size at time of investigation (persons in t=T)
		Financing problems mentioned
		Financial consulting needs (pre start up)

3. RESULTS

Before testing the influences of planning sophistication on new venture performance, the general planning behaviour of entrepreneurs should be considered. Table 5 shows the results of four OLS-Regression models analyzing the role of four control variables concerning planning depth, which is segregated in the four dimensions presented above. In addition to this setting, the variables gender and team were implemented to test for differences in the planning behaviour coming out of the personal sphere of the entrepreneurs as well.

TABLE 5 Impact of control variables on planning depth (OLS regression Betas)

planning depth indicators	Financial		Profit and Loss		Staff		Marketing	
	Beta	T	Beta	T	Beta	T	Beta	T
Constant		2,751**		1,989^{+}		-,765		1,360
Start up-size (persons)	-,061	-,449	,073	,526	,216	1,643	,136	1,016
Start up-size (money)	,092	,680	-,206	-1,496	-,132	-1,016	-,099	-,745
Financing problems mentioned	,066	,474	,017	,123	,214	1,590	,209	1,523
Financial consulting needs (pre start up)	,123	,880	,116	,813	-,078	-,579	,046	,333
Male (yes=1)	,234^{+}	1,742	-,139	-1,014	-,056	-,431	-,242^{+}	-1,828
Team (yes=1)	-,113	-,830	-,046	-,329	,196	1,490	,038	,281
Observations	59		59		59		59	
R-squared	,113		,074		,175		,142	
Adj R-squared	,011		-,033		,080		,043	
α	,374		,657		,109		,220	

$^{+}$ *significant at 10 % / * significant at 5 % / ** significant at 1 %*

Because of the small number of respondents within the variables Start up-size (n=104) and Need for financial consulting (n=154), the model has to work only with 59 cases. As can be seen, in terms of significance there are only two noteworthy differences in planning depth: Men seem to do deeper planning in financial affairs, while women seem to do a more sophisticated plan in the marketing area. On the given empirical basis, this could only be viewed as a possible tendency, however, since all four models demonstrate a level of significance which is too small for further interpretations.

Table 6 gives an outline of an overall correlation analysis conducted with the four independent variables and the performance measure.

TABLE 6 Correlation of Start up performance and planning depths (Pearson´s R)

n= 227	Correlation (α in parentheses)
Financial planning depth	,026 (> 0.1)
Profit and Loss planning depth	,146* (,014)
Staff planning depth	-,064 (> 0.1)
Marketing planning depth	-,042 (> 0.1)

$^{+}$ *significant at 10 % / * significant at 5 % / ** significant at 1 %*

The correlation analysis reveals only one remarkable relation between planning depth and performance. Planning in terms of profit and loss seems to have a slight impact on venture performance, while all other independent variables are inconspicuous. However, this analysis is correlational only, while the theoretical relation to be examined shows a one-way connection between reason and effect. Having a continuous performance variable the examination could therefore be done with a regression model again. Moreover, the hypothesis has to be tested in a multivariate context rather than in a bivariate one. The research question and the arrangement of variables given here lead to the utilization of OLS estimators. Testing for the applicability of this method, especially for multicollinearity (for details on all requirements see Wooldridge 2003) exposed no violations of its preconditions. Plots of the relevant variables against performance implied only placid nonlinearities. Since corresponding transformations of performance (log) supplied poor results only, respective changes had to be rejected.

Table 7 demonstrates the results of an OLS regression considering the four stated independent variables and four control variables. Differing from the concept shown in table 5, one of the prior used control variables (Start up-size, in terms of the capital gained) was skipped because of its small number of valid cases. The age of enterprise is included as an additional control variable, because in the early development stage of an enterprise age is a substantial cause for differences in size.

TABLE 7 Impact of planning depth indicators on new venture performance (OLS regression Betas)

independent variables	dependent: performance		
	Beta	T	α
Constant		-2,050	,042
Age of enterprise	-,164*	2,059	,041
Start up-size (persons)	-,329***	-4,194	,000
Financing problems mentioned	,090	1,109	,269
Financial consulting needs (pre start up)	-,121	-1,503	,135
Financial planning depth	-,022	-,269	,788
Profit and Loss planning depth	,183*	2,238	,027
Staff planning depth	-,026	-,314	,754
Marketing planning depth	-,145^{+}	-1,735	,085
Observations		144	
R-squared		,201	
Adj R-squared		,153	
α (regression model)		,000	

$^{+}$ *significant at 10 % / * significant at 5 % / ** significant at 1 %*

The results depicted in table 7 clearly show a potential explanation rate of model. The most extensive pressure on performance could be identified in Start up-size, which influences the dependent variable heavily negative. The age of the enterprise has an equally directed, but smaller and less significant impact on performance, which confirms findings of prior studies. Another relevant parameter of performance in this context is the Profit and Loss planning depth. It promotes performance in a positive way. This result is in harmony with the theoretic assumptions stated. In contrast to these assumptions, Financial planning depth, Staff planning depth, and Marketing planning depth do not promote, but restrict performance slightly. The Financial and Staff planning depth measures have a quite small effect. Without doubts, the hypotheses concerning these three planning variables have to be omitted. Concerning the marketing area, the negative relation even is vaguely significant. Controlling for Financing problems mentioned and Financial consulting needs (pre start up) gives no significant differences.

All in all, the impact of planning sophistication on new venture performance is limited. A base model directed only on the control variables reached an adjusted R-

squared of 0,135 (α = ,000) already. So the planning depths deliver no remarkable gain in R-squared (Δ=+0,018).

4. CONCLUSION

This paper investigates planning practices as a determinant of new venture performance. Utilizing the start up panel NRW files it uses a survey that reduces the distorting effects of survivorship and interview bias. However, it faces some limitations that could lead to future research approaches. First, not every planning activity is subject to written plans (see Baker – Miner - Eesley 2001 for an examination of the propensity of a transition from improvisation to planning). So part of the start up preparations were not disclosed with a business plan. Second, it is limited to the crafts sector with highly successful enterprises in terms of survival.

It could be found that initial business planning sophistication has a very small impact on performance and is limited at most to the profit and loss planning depth. Furthermore, profit and loss planning is the most elaborate area of initial business planning and is executed far more intensely than financial planning. Staff and marketing planning on the other hand are handled as very less important planning topics.

As one can see, theory and some parts of the literature described in chapter 1 let assume that planning per se makes sense. Some studies confirmed that planners perform better than non-planners or that accurate planning outperforms less sophisticated planning activities. Others studies rejected this assumption. This study is not meant to doubt this interrelation. But concerning performance, we now can conclude that planning is rather a hygiene factor than a determining issue in a way that planning elaboration resp. raised planning depth could increase performance. In other words: Initial planning is an important requirement of success, but cannot lift it, until certain minimum constraints are met.

Further research will have to answer the question what those minimal requirements are.

5. REFERENCES

Ackelsberg, R. - Arlow, P. (1985) Family-owned Business do plan and it pays off, *Long Range Planning* 18, p. 61-67.

Baker, T. - Miner, A.S. - Eesley, D.T. (2001) Fake it until you make it: improvisation and new ventures, *Frontiers of entrepreneurship research*, Waltham (Mass.),

Baker, W.H. - Addams, H.L. - Davis, B. (1993) Business planning in successful small firms, *Long Range Planning* 18, p. 61-67.

Berry, M. (1998,) Strategic planning in small high tech companies, *Longe Range Planning*, 31, p. 455-466.

Boyd, B.K. (1991) Strategic Planning and Financial Performance: A Meta-Analytic Review, *Journal of Management Studies*, 28, p. 353-373.

Bracker, J.S. - Keats, B.W. - Pearson, J.N. (1988) Planning and Financial Performance among Small Firms in a Growth Industry, *Strategic Management Journal*, 9, p. 591-603.

Bracker, J.S. - Pearson, J.N. (1986) Planning and Financial Performance of Small, Mature Firms, *Strategic Management Journal*, 7, p. 503-522.

Brüderl, J. - Preisendörfer, P. - Ziegler, R. (1992) Surrvival chances of newly founded business organizations, *American Sociological Review*, 24, p. 227-302.

Brüderl, J. - Preisendörfer, P. - Ziegler, R. (1998) Der Erfolg neugegründeter Betriebe, eine empirische Studie zu den Chancen und Risiken von Unternehmensgründungen, 2nd Ed., Berlin: Duncker & Humblot.

Carter, N.M. - Gartner, W.B. - Reynolds, P.D. (1996) Exploring start-up event sequences, *Journal of Business Venturing,* 11, p. 151-166.

Carter, N.M. - Stearns, T.M. - Reynolds, P.L. - Miller, B.A. (1994) New venture strategies: theory development with an empirical base, *Strategic Management Journal,* 15, p. 21-41

Castrogiovanni, G.J. (1996) Pre-Startup Planning and the Survival of New Small Businesses: Theoretical Linkages, *Journal of Management*, 22, p. 801-822.

Delmar, F. - Shane, S. (2003) Does business planning facilitate the development of new ventures?, *Strategic Management Journal*, Vol. 24, p. 1165-1185.

Delmar, F. - Shane, S. (2004) Legitimating first: organizing activities and the survival of new ventures, *Journal of Business Venturing*, 19, p. 385-410.

Diochon, M. - Menzies, T.V. - Gasse, Y. (2005) Exploring the relationship between start-up activities and new venture emergence: a longitudinal study of Canadian nascent entrepreneurs, *International Journal of Management and Enterprise Development,* 2, p. 402-426.

Dollinger, M. J. (2003) Entrepreneurship. Strategies and Resources. 3rd Ed., Upper Saddle River, NJ : Prentice Hall.

Dowling, M. (2002) Businesspläne. In M. Dowling - H. J. Drumm (eds.), Gründungsmanagement. Berlin, Heidelberg, New York: Springer, p. 219-225.

Gable, M. - Topol, M.T. (1987) Planning practices of small-scale retailers, *American Journal of Small Business,* 12, p. 19-32.

Gelderen, M. - Frese, M. (1998) Strategic process as a characteristic of small scale business oweners: relationships with success in a longitudinal study, *Frontiers of Entrepreneurship Research*, p. 234-248.

Gibson, B. - Cassar, G. (2005) Longitudinal Analysis of Relationships between Planning and Performance in Small Firms, *Small Business Economics,* 25, p. 207-222.

Gruber, M., Elsenmüller, B., Fischer, F., Grampp, M. (2002) Business-Planning in Start-ups: Wissenschaftliche Erkenntnisse und Praktische Erfahrungen, *Internationales Gewerbearchiv,* 50, p. 217-237.

Hebig, M. (2004) Existenzgründungsberatung. Steuerliche, rechtliche und wirtschaftliche Gestaltungshinweise zur Unternehmensgründung. 5th Ed., Berlin: Schmidt.

Hisrich, R. D. - Peters, M. P. - Sheperd, D.A. (2005) Entrepreneurship. Starting, Developing, and Managing a new Enterprise. 6th Ed., Boston: McGraw-Hill.

Honig, B. - Karlsson, T. (2001) Business plans and the nascent firm: A study of instrumental and institutional theories, *Frontiers of entrepreneurship research*, Waltham (Mass.).

Honig, B. - Karlsson, T. (2004) Institutional Forces and the written business plan, *Journal of Management*, 30, p. 29-48.

Hormozi, A.M. - Sutton, G.S. - McMinn, R.D. - Lucio W. (2002) Business plans for new or small businesses: paving the path to success, *Management Decision*, 40, p. 755-763.

Jones, D.W. (1982) Characteristics of planning in small firms, *Journal of Family Owned Business Management*, 20, p. 15-25.

Jungbauer-Gans, M. - Preisendörfer, P. (1991) Verbessern eine gründliche Vorbereitung und sorgfältige Planung die Erfolgschancen neugegründeter Betriebe? *Zeitschrift für betriebswirtschaftliche Forschung*, 43, p. 987-996.

Klandt, H. - Kirchhoff-Kestel, S. - Struck, J. (1998) Zur Wirkung der Existenzgründungsförderung auf junge Unternehmen. Eine vergleichende Analyse geförderter und nicht geförderter Unternehmen. Köln, Dortmund: FGF.

Kraus, S. - Schwarz, E. (2007) The role of pre-start-up planning in new small business, *International Journal of Management and Enterprise Development*, 4, p. 1-17.

Kuratko, D.F. - Hodgetts, R.M. (2004) Entrepreneurship. A Contemporary Approach. 6th Ed., Mason/Ohio: South-Western.

Lumpkin, G.T. - Shrader, R.C. - Hills, G.E. (1998) Does Formal Business Planning Enhance the Performance of New Ventures, *Frontiers of entrepreneurship research*, Waltham (Mass.).

Lussier, R.N. (1996) A startup business success versus failure prediction model for the retail industry, *The Mid-Atlantic Journal of Business*, 32, p. 79-92.

Lussier, R.N. - Pfeiffer, S. (2001) A Crossnational Prediction Model for Business Success, *Journal of Small Business Management,* 39, p. 228-239.

Matthews, C.H. - Human, S.E. (2000) The little engine that could: Uncertainty and growth expectations of nascent entrepreneurs, *Frontiers of entrepreneurship research*, Waltham (Mass.).

McKeever, M. (2005) How to write a business plan. 7. Ed., Berkeley, CA: Nolo.

Mugler, J. (1998) Betriebswirtschaftslehre der Klein- und Mittelbetriebe. Band 1, 3rd Ed., Wien, New York: Springer.

Olson, P.D. - Bokor, D.W. (1995) Strategic process-content interaction: effects on growth, performance in small, start-up firms, *Journal of Business Management*, 33, p. 34-44.

Perry, S.C. (2001) The Relationship between Written Business Plans and the Failure of Small Businesses in the U.S., *Journal of Small Business Management,* 39, p. 201-208.

Pleschak, F. - Werner, H. (1998) Technologieorientierte Unternehmensgründungen in den neuen Bundesländern - Wissenschaftliche Analyse und Begleitung des BMBF-Modellversuches. Heidelberg: Physica.

Rauch, A. - Frese, M. (1998) A Contingency Approach to Small Scale Business success: A Longitudinal Study on the Effects of Environmental Hostility an Uncertainty on the Relationship of Planning and Success, *Frontiers of entrepreneurship research*, Waltham (Mass.).

Rauch, A.- Frese, M. (2000) Psychological Approaches to Entrepreneurial Success: A General Model and an Overview of Findings. In C. L. Cooper, I. T. Robertson (eds.), International Review of Industrial and Organizational Psychology. Chichester: Wiley.

Rauch, A. - Frese, M. - Sonnentag, S. (2000) Cultural Differences in Planning/Success Relationships: A Comparison of Small Enterprises in Ireland, West Germany, and East Germany, *Journal of Small Business Management*, 38, p. 28-40.

Ripsas, S. (1997) Entrepreneurship als ökonomischer Prozess. Perspektiven zur Förderung unternehmerischen Handelns. Wiesbaden: Deutscher Universitäts-Verlag .

Risseeuw, P. - Masurel, E. (1994) The role of planning in small firms: empirical evidence from a service industry, *Small Business Economics*, 6, p. 313-322.

Roberts, E. (1983) Business Planning in the Start-up High-Technology Enterprise, *Frontiers of Entrepreneurship Research,* 3, p. 107-117.

Robinson, R.B. - Logan, J.E. - Salem, M.Y. (1986) Strategic versus operational planning in small retail firms, *American Journal of Small Business*, 10, p. 7-16.

Robinson, R.B. - Pearce, J.A. (1983) The Impact of Formalized Strategic Planning on Financial Performance in Small Organizations, *Strategic Management Journal*, 4, p. 197-207.

Rue, L.W. - Ibrahim, N.A. (1998) The Relationship between Planning Sophistication and Performance in Small Businesses, *Journal of Small Business Management*, 36, 4, p. 24-32.

Rüggeberg, H. (1997) Strategisches Markteintrittsverhalten junger Technologieunternehmen. Wiesbaden: Deutscher Universitäts-Verlag.

Schulte, R. (2001) Konzeption und Methodik des Gründerpanels Nordrhein-Westfalen. In H. Klandt, K. Nathusius, J. Mugler, H. Heil (eds.), Gründungsforschungs-Forum 2000. Dokumentation des 4. G-Forums. Lohmar, Köln: Eul, p. 47-62.

Schulte, R. (2002) Finanzierungs- und wachstumstheoretische Aspekte der Frühentwicklung von Unternehmungen und deren empirische Analyse. Habilitationsschrift, Universität Dortmund.

Schulte, R. (2004) Was ist „Gründungserfolg“? – Überlegungen zur Operationalisierung eines folkloristischen Begriffs. In J. Merz, J. Wagner (eds.), Perspektiven der MittelstandsForschung. Ökonomische Analysen zu Selbständigkeit, Freien Berufen und KMU. Münster: Eul, p. 203-228.

Schutjens, V.A.J.M. - Wever, E. (2000), Determinants of new firm success, *Papers in Regional Science*, 79, p. 135-159.

Schwenk, C.R. - Shrader, C.B. (1993) Effects of Formal Strategic Planning on Financial Performance in Small Firms: A Meta-Analysis, *Entrepreneurship Theory and Practice*, 17, p. 53-64.

Spitzer, D.M. - Alpar, P. - Hills, G.E. (1989) Business Planning in New, High Technology Firms, *Frontiers of Entrepreneurship Research*, p. 398-407.

Timmons, J. (2003) New Venture Creation. Entrepreneurship for the 21st century. 6th Ed., Boston: McGraw-Hill/Irwin.

Unni, V.K. (1984) An analysis pf entrepreneurial planning, *Managerial Planning*, 33, p. 51-54.

Van Gelderen, M. - Frese, M. (1998) Strategy Process as a Characteristic of Small Scale Business Owners: Relationships with success in a Longitudinal Study, *Frontiers of entrepreneurship research*, Waltham (Mass.).

Van Gelderen, M. - Frese, M. - Ombach, M. (2000) How to Plan as a Small Scale Business Owner: Psychological Process Characteristics of Action Strategies an Success - *Journal of Small Business Management*, 38, p. 1-18.

Van Gelderen, M. - Frese, M. - Thurik, R. (2000) Strategies, Uncertainty and Performance of Small Business Startups, *Small Business Economics*, 15, p. 5-181.

Woolridge, J.M. (2003) Introductory Econometrics: A modern Approach. 2nd Ed., Mason/Ohio: Thomson South-Western.

Yusuf, A. - Saffu, K. (2005) Planning and Performance of Small and Medium Enterprise Operators in a Country in Transition, *Journal of Small Business Management,* 43, p. 480-497.