A STAKEHOLDER BASED VIEW OF FIRM GROWTH: STAKEHOLDER ORIENTATION AND LIMITS TO VALUE CREATION FROM GROWTH

PETER SNOEREN
PhD Student
Bocconi University
Department of Management and Technology
Via Roentgen, 1
20136 Milano, Italy
Tel: +(39) 34 66 317 192
e-mail: peter.snoeren@phd.unibocconi.it
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Abstract: In this paper I adopt a stakeholder based view of firm growth in order to understand why some firms are able to convert operations growth into value creating business even at high rates of growth, and others are not. This view recognizes that the firm’s stakeholders are a team that work together and pool their knowledge, social capital, and resources to create value, and that are all affected by growth. I find that the relationship between operations growth rate and value creation growth is inverse U shaped. Thus, the value firms can create from growth in a given period is limited due to exponentially increasing difficulties with sensing and seizing growth opportunities. However, I find that the extent to which firms strategically orient themselves towards their stakeholders both constrains and enables value creation, as firms are better able to leverage stakeholder resources, but run the risk of focusing too much on current stakeholders so that they fail to see outside opportunities. These findings show that the amount of value firms can create from growth is limited, and the way firms orient themselves towards their stakeholders has implications for firm evolution, in particular it affects the firm’s strategic options for growth.

Keywords: Growth; Value Creation; Firm Evolution; Stakeholder Theory; Stakeholder Orientation
INTRODUCTION

The media, policy-makers, and managers all value high growth rates, and value creating growth has been called one of the cornerstones of the resource based view (See the debate held by Kor & Mahoney, 2004; Lockett & Thompson, 2004; Rugman & Verbeke, 2002). Yet, not all firms are able to convert operations growth into value creating business\(^1\). Recent work in stakeholder theory shows that firms can be seen as a team of internal and external stakeholders that cooperate in order to create value (Barney, 2015; Blair & Stout, 1999; Freeman, 1984; Hill & Jones, 1992; Parmar et al., 2010), and that these stakeholders possess knowledge, social capital, and resources that can help firms create value from growth (Barringer, 2000; Bettinazzi, 2016; Cording, Harrison, Hoskisson, & Jonsen, 2013; Haspeslagh & Jemison, 1991; Pitelis & Wahl, 1998). Even though we know that the degree to which management strategically orients itself towards its stakeholders (Crilly, 2011; Flammer & Kacperczyk, 2014) enhances stakeholder reciprocity (Bosse, Phillips, & Harrison, 2009), we don’t know whether this affects the firm’s ability to leverage its stakeholder resources and create value from growth. I adopt a stakeholder based view of firm growth and find that firms face limits to the amount of value they can create from operations growth in a given period, but that these limits depend on the extent to which they strategically orient themselves towards their stakeholders.

\(^{1}\) Growth is seen as an important goal by the media which keep lists of fast growing firms (Nicholls-Nixon, 2005), policy makers that hope to achieve increases in available jobs and tax income (Coad, 2007a; Storey, 1994), businesses that set goals for growth (Shane, 1996), as well as academics who use growth as a measure of performance (Davidsson, Steffens, & Fitzsimmons, 2008). However, the outcomes associated with operations growth differ greatly across firms and increase at a slower rate than do inputs (Coad, 2009).
I start from Penrose (1959), who determined the factors that limit growth rate, and is one of the first scholars to acknowledge the importance of stakeholders in the growth process both in terms of the use of internal and external relationships to sense growth opportunities and in terms of integrating growth into a complex organizational system (Pitelis & Wahl, 1998). I propose two hypotheses regarding how the rate of operations growth affects the firm’s ability to create value from growth, and the role that a strategic orientation towards stakeholders plays in this process.

First, I argue that the relationship between operations growth and value creation is inverse-U shaped. When firms grow their operations, keeping fixed efficiency, they create more value. However, as firm grow at a higher rate they have to defer to more and more uncertain growth opportunities and can no longer effectively monitor the integration of their growth, reducing the efficiency with which they create value. These two mechanisms combined sum to an inverse-U shaped relationship2.

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2 The fact that a limit to the amount of value that can be created in a given time period exists is consistent with anecdotal evidence of for instance Cisco, who was lauded for their acquisition strategy throughout the 90’s and kept increasing their rate of growth up until the point that in 1999 they made 18 acquisitions. In 2000 they drastically changed their acquisition strategy after they found not all of these acquisitions were successful because they could not integrate them into their current organizational system (Brueller & Capron, 2010).
Second, the value firms can create from operations growth depends on the extent to which firms strategically orient themselves towards their stakeholders. On the one hand, stakeholder orientation enhances stakeholder reciprocity, so that they are more likely to put effort in value creation and share knowledge, social capital, and resources relevant to firm growth (Bosse et al., 2009; Harrison, Bosse, & Phillips, 2010). On the other hand, higher stakeholder orientation also increases firm focus on and commitment to their current stakeholders, and in extreme cases they may fail to consider growth opportunities with high value creating potential for non-current stakeholder parties. (Frooman, 1999; Phillips, Berman, Elms, & Johnson-Cramer, 2010; v. Werder, 2011). Thus, firms with medium levels of stakeholder orientation are able to create more value from growth than firms with low or high levels of stakeholder orientation.

I test two hypotheses based on these logics using a sample of more than 4800 firms over 10 years covered by the Asset4 database by Thomson Reuters, which rates firms based on more than 1200 items, using all external public communication by these companies. This sample is cross-industry and cross-country, and covers firms listed in major indices such as MSCI World, Nasdaq100, Russel 1000, and ASX 300. I matched the data in this dataset with data from Orbis on these firms’ financial status and size. I find that the relationship between the rate of operations growth and the rate of growth of value creation is indeed inverted U-shaped. Furthermore, firms with medium levels of stakeholder orientation are able to create more value from growth than firms with low or high levels of stakeholder orientation.
By studying the value firms can create from operations growth in a given period depending on the extent to which they integrate stakeholder interests and resources, I integrate and extend the literatures on organizational growth and stakeholder theory. First and foremost, I find that stakeholder orientation affects the amount of value firms can create from growth. The relationship between CSR and stakeholder orientation and financial performance has been relatively well established, this indicates that stakeholder orientation also affects the strategic options for value creating growth that firms possess at a given time, one of the cornerstones of the research based view (Kor & Mahoney, 2004). Furthermore, the finding that firms face limits to the amount of value they can create from operations growth in a given period, highlights once again the strategic management literature on corporate development that firms can grow too fast (Capron, 2013; Laamanen & Keil, 2008), and generalize this finding from acquisition to the total amount of growth. Furthermore, it shows that a descriptive stakeholder based view of the firm is able to explain both the enabling and constraining aspects of stakeholder orientation on value creation (Phillips et al., 2010), so that stakeholder orientation serves as a double edged sword.

THEORY

Stakeholder Theory, Operational Growth and Value Creation
The main proposition of stakeholder theory is that if a firm wants to maintain viability in the long run, managerial attention should go out to more stakeholders than just the firm’s shareholders (Parmar et al., 2010). Stakeholders are “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984, p.46). Recent work in stakeholder theory and the research based view shows that descriptively (Barney, 2015; Bosse et al., 2009; Harrison et al., 2010; Mitchell, Agle, & Wood, 1997; Parmar et al., 2010), prescriptively (Freeman, 1984; Hill & Jones, 1992), as well as legally (Blair & Stout, 1999), firms can be seen as a team of internal and external stakeholders that cooperate in order to create value, and managers can choose to prioritize other stakeholders than only shareholders. In this paper, therefore, I take a stakeholder based view of firm growth, in which value from growth is created by a team of stakeholders that contribute knowledge, social capital and resources (Blair & Stout, 1999) that can help firms sense and seize growth opportunities, whilst receiving different benefits from growth.
Stakeholders possess knowledge, social capital, and resources relevant to the sensing and seizing of growth opportunities. Customers demand new products, services, and functionality, and are often willing to design or adapt products, or provide functionality requirements (Baldwin, Hienerth, & von Hippel, 2006; Hippel, 1998; von Hippel, 1976). Suppliers provide resources and knowledge for growth (Kotabe, Martin, & Domoto, 2003; McEvily & Marcus, 2005; Uzzi, 1996). Employees integrate information from customers and suppliers, and they execute the growth strategy (Chakravarthy & Gargiulo, 1998; Haspeslagh & Jemison, 1991). Local communities possess relevant knowledge and can provide political support for or opposition to growth (see for example Kang, 2013). Lastly, shareholders evaluate growth opportunities and select initiatives for implementation. For instance, stakeholders can start lawsuits (Eesley & Lenox, 2006), and governments can refuse to give permits (Kang, 2013). Thus, if managers can navigate potential issues with information asymmetry and incentive misalignment between stakeholders (Hill & Jones, 1992), and get their stakeholders to pool their information, social capital, and resources in order to create value, instead of using them for (potentially opportunistic) value capture (Frooman, 1999; Phillips et al., 2010; v. Werder, 2011).

Strategically orienting the firm towards stakeholders is one way to leverage better the knowledge, social capital, and resources that stakeholders possess. Stakeholder orientation is the degree to which management focuses its attention on identifying stakeholder interests, knowledge and resources, and integrates them in their decision making processes (Crilly, 2011; Flammer & Kacperczyk, 2014). For example, in order to identify and integrate stakeholder interests in their decision processes, firms can add employees to the board of directors, as often happens in Germany. Another example can be found in Cisco, who built a customer advocacy department charged with the task of looking after customer interests.
Stakeholder orientation has been associated with a myriad of positive outcomes, such as better access to finance, better financial performance, and higher rate of innovation (see for example: Flammer & Kacperczyk, 2014; Hawn & Ioannou, 2015; Hillman & Keim, 2001; Ioannou & Serafeim, 2014). When stakeholders feel their interests are integrated into decision processes, they are more likely to reciprocate and put effort into value creation by sharing their information and resources, and less likely to put effort into value capture (Bosse et al., 2009; Harrison et al., 2010). Furthermore, they would be more likely to share information that allow firms sense opportunities with higher value-creating potential (Bosse et al., 2009; Teece, 2007).

Yet, it is unclear how stakeholder orientation affects organizational evolution, and it is interesting to see whether firms that orient themselves towards their stakeholders can create more value from growth and thus potentially choose different growth strategies.

**Value Creation**

The majority of firm-level studies in the strategic management literature concern themselves only with the value captured by the firm. However, both from a stakeholder perspective and from the payments perspective founded in the resource based view this value is of lesser concern. From a stakeholder perspective, where the legal boundaries of the firm are secondary and the variable of interest is the value created by a team of stakeholders, the amount of value the firm captures is no longer the main concern. Therefore, in this perspective, it is more appropriate to look at the total amount of value created that managers can distribute among their stakeholders.
This is consistent with recent calls from the RBV, where it is recognized that rents from important resources are not necessarily accrued by the firm, but could also go to other stakeholders, and therefore in order to understand access to superior resources, it is more appropriate to consider the payments made to the firm (Coff, 1999, 2010; Lippman & Rumelt, 2003), which are then bargained for amongst stakeholders (Lippman & Rumelt, 2003). Furthermore, because not all resources are owned by the firm, the theory on strategic factor markets is inconsistent with a shareholder perspective. Since the value of valuable stakeholder resources is per definition uncertain (otherwise the firm could not profit from them), stakeholders deserve not only fixed claims, but can potentially be residual claimants of firm value creation (Barney, 2015). Thus, the value created from stakeholder knowledge, social capital, and resources can be appropriated by all stakeholders, and therefore for the purpose of understanding the value of these resources it is more appropriate to investigate the total sum of payments.

**Operational Growth**
The challenge of creating value from growth has received much attention in the strategic management literature, but usually concerns individual growth initiatives. For instance, we know that firms can learn to generate value in alliances from experience, or by dedicating a specific organizational function to them (see for example Kale, Dyer, & Singh, 2002; Zollo, Reuer, & Singh, 2002). Similarly, ample evidence exists that firms differ in their ability to profit from acquisitions (see for example Barkema & Schijven, 2008; Haspeslagh & Jemison, 1991; Jemison & Sitkin, 1986; Pennings, Barkema, & Douma, 1994). However, research also suggests that in order to understand growth fully, we should look beyond individual corporate development initiatives and consider the firms overall growth strategy (Laamanen & Keil, 2008). Firms usually have an overarching growth strategy and are able to gain different types of knowledge and resources from different modes of growth (Capron & Mitchell, 2009; Haspeslagh & Jemison, 1991; Zollo & Reuer, 2009). Because growth is more encompassing than just the sum of the individual initiatives, in this paper I will investigate whether and how firms differ in their ability to create value from the rate at which they grow their operations as a whole.
The literature on organizational growth is diverse and can be subdivided roughly into five streams of literature: neoclassical economics, agency theory, population ecology, evolutionary economics, and Penrosian growth (Coad, 2007a). Although my theoretical framework is consistent with and borrows from all of these, Penrose (1959) is at the center of my reasoning as she investigates the limits to growth rate. From Penrose (1959) it flows that each firm has a certain ability to sense and seize growth opportunities\(^3\). Sensing growth opportunities involves understanding the external and internal environment, and from that environment to choose those growth opportunities that the firm expects to be profitable. Seizing growth opportunities involves selecting suppliers, employees, and potentially building organizational structures and routines to optimally create value from these opportunities (Teece, 2007). According to Penrose, the firm’s ability to sense and seize growth opportunities determines the internal limits to the rate of growth.

In general, the main hypothesis (also called the ‘penrose effect’) that has been tested regarding these limits, is that if a firm shows high growth in one period, the next period the firm will grow less (Tan & Mahoney, 2005). Contrasting this two period approach, in this paper I will take a one period approach, and investigate the immediate effect of growth rate on value creation. Research so far has rarely investigated the causal relationship from general growth to firm outcomes (Coad, 2009). Interesting exceptions generally hypothesize a positive relationship (see for instance Coad, Rao, & Tamagni, 2011; Coad, 2007b, 2010; Lee, 2014).

\(^3\) Penrose attributes these to what she respectively calls entrepreneurial and managerial resources, however I adopt more recent terminology that is consistent with Teece (2007).
One of the boundary conditions of this theory is that it only considers organizational growth, not organizational decline. Positive growth is empirically found to be different from negative growth (Coad et al., 2011). Furthermore, the mechanics underlying organizational growth are very different from those underlying organizational decline. Operations growth often has a revenue increase motivation, whereas decline has a cost reduction motivation (Vidal, 2013). Furthermore, the process through which growth is conducted is different from organizational decline and it has a different impact on virtually all stakeholders involved (Karim, 2009; Whetten, 1980, 1987). Sensing growth opportunities is very outwards focused as firms need to understand demand and supply conditions in a market that is at least new to the firm, while seizing growth opportunities requires the ability to integrate new employees and assets into the organization. Instead while declining firms usually are very inwards focused, and they need to be able to understand the relative benefits of markets they are already operating in, which requires very different skills.

HYPOTHESES

The baseline relationship between growth in operations and growth in value creation is formed by two main mechanisms that together form an inverse U shaped relationship (Haans, Pieters, & He, 2015). The first mechanism concerns the positive relationship between operation size and value creation. Firms with larger operations in terms of employees can achieve a higher level of value creation, this is a very basic result from economics literature (Cobb & Douglas, 1928). Firms that increase their operations can manufacture more products or deliver more services, and therefore if they keep producing at the same efficiency we expect them to move along the production function and thus increase their value creation.
However, the act of growing operations might not only affect value creation through firm size, but also through a direct impact on the efficiency with which the firm operates. When firms decide to grow they prefer to seize the opportunity with the highest value creating potential. However, given the firm’s ability to sense opportunities, the more opportunities the firm decides to seize in that period, the more they have to divert to opportunities with a lower and more uncertain value creating potential. Thus, the marginal increase in value creation growth will reduce as firms grow more in terms of operations. Depending on the firm’s ability to seize growth opportunities, a firm can monitor the integration of only a certain amount of growth. Penrose (1959) notes that managerial attention is needed in order to monitor the integration of the new stakeholders and resources into the organization. Current organizational structures might not support an infinite amount of growth (Chen, Williams, & Agarwal, 2012), and the more a firm grows, the less well the firm is able to integrate all new growth into its organizational structure (Barkema & Schijven, 2010). Thus, the more a firm grows its operations, the higher the need to divert to more uncertain and less attractive growth opportunities and the lower the ability to integrate growth, reducing exponentially the efficiency with which the firm creates value from its operations.

These value creation and efficiency loss mechanisms combined form an inverse-U shaped relationship between operations growth and value creation growth. Then, the hypothesis tested in this paper becomes the following:

*Proposition 1: The relationship between operations growth and value creation growth is inverse-U shaped.*

**Stakeholder Orientation and Growth**
Because stakeholders possess information and resources relevant to the sensing and seizing of growth opportunities, stakeholder orientation affects the relationship between operations growth and growth in value creation. It does so through two mechanisms, one positive and one negative. Together these form an inverse U shaped relationship.

When stakeholders are more involved in the organizational decision processes, they are more likely to share information regarding their utility functions with the firm (Harrison et al., 2010). This information could allow decision makers to perceive a better set of growth opportunities with the same amount of entrepreneurial resources (Teece, 2007). Thus, given the same amount of entrepreneurial resources and the same amount of growth, firms with higher levels of stakeholder orientation should select better growth opportunities.

After the growth opportunity is selected, all stakeholders together generate a certain amount of value. Each stakeholder determines his actions according to two relevant decision variables, namely the size of the total value that his actions create, and the share of that value that the stakeholder can appropriate (Coff, 1999, 2010). If stakeholders perceives the firm to care about them, they are more likely to believe that the distribution will be done in a just manner ex post (Harrison et al., 2010). Subsequently, in deciding on their course of action, they will put more effort toward increasing the total value created and less effort toward the distribution of this pie (Bosse et al., 2009). Because each stakeholder will put more effort into value creation, a firm with better stakeholder orientation practices will need to put less managerial resources towards integrating the same amount of growth.
However, stakeholder orientation can also influence value creation from operations growth negatively as firms become more focused on the knowledge and resources that their current stakeholders possess. When sensing opportunities, firms might focus on information regarding the utility functions of their current stakeholders, irrespective of whether other non-current stakeholder parties exist for which the firm is in a better position to create value. For instance, Christensen and Bower (1996) found that firms in the disk drive industry that focused overly on the demands of their current customers, were in danger of overlooking other possible technologies that were at that point only interesting to other consumers, but ended up creating more value. Analogously, to seize opportunities, firms might be more likely to source this growth using current stakeholders, irrespective of whether other parties are in a better position to create value with the firm. For instance, Uzzi (1997) finds that firms that are embedded into dense networks in the apparel industry are more likely to stay with their business partners (suppliers and buyers) even when this is not the best choice financially.

Together, these positive and negative moderating effects create an inverse U-shaped moderating effect, so that firms with moderate levels of stakeholder orientation are better able to create value from growth, and are able to grow more in the same period of time without the efficiency loss effect taking over than firms with low or high levels of stakeholder orientation.

Proposition 2: firms with medium levels of stakeholder orientation are able to create more value from growth than firms with low or high levels of stakeholder orientation.

METHODS

Sample
To test my hypotheses, I look at the full sample of companies that Thomson Reuters rates on their environmental, economic, and social performance in the Asset4 database. This sample consists of an unbalanced panel of in total 4,800 public companies in multiple countries and industries over the period of maximum 10 years. I use this sample, because the Asset4 database, which lists information on more than 1200 individual items that are assessed every year using publicly available data, has detailed information that is related to the firm’s stakeholder orientation. The dataset covers sixty-five countries and all twenty two-digit NAICS industries, and the companies are selected from popular indices such as MSCI World, Europe, and Emerging Market, STOXX 600, Nasdaq 100, Russell 1000, S&P 500, FTSE 100, ASX 300. The broadness of this dataset helps ensure generalizability but reduces the ability to pinpoint the exact mechanisms underlying the relationships I study. I have supplemented the information in the Asset4 database with accounting data gathered from the Orbis database, and acquisition data from the zephyr database, both by Bureau van Dijk, with which I compute measures for input and output growth, size, industry, country, and age.

The final dataset is what remains after merging these datasets, dropping observations with missing variables and extreme outliers (above the 99th percentile sales, employee, and asset growth)\(^4\), and deleting observations with negative growth\(^5\). This leaves an unbalanced panel of 11262 observations from 2810 firms that have non-missing values for at least three observations over the period of 2005-2014.

\(^4\) Observations in the 99th percentile of growth are dropped because I am using ratios, and these observations have very high numbers (the maximum a growth in terms of employees of 70000 times in size). I have selected a random sample of 100 observations and looked up all these observations (405), and most of these indeed were special circumstances that do not reflect strategic growth. For instance the firm that grew 70000 times in size had bought an empty shell in one year (with only one employee), and subsequently had acquired several large firms.
I measure operations growth as employee growth, since of the two operational aspects that grow (assets and employees), employees is the most difficult to integrate and therefore it is more likely for the efficiency loss effect to take over. I measure growth in value creation as growth in sales, which represents the growth in the amount of value created that can be redistributed across its stakeholders\(^6\) (Lippman & Rumelt, 2003). Thus, the results relate to the total amount of value that is created, and not to how the value is distributed across the stakeholders. Measuring the amount of value captured by the firm would require me to make assumptions about the distribution of value across the set of stakeholders (Lippman & Rumelt, 2003).

**Measures for Dependent Variables**

**Value Creation:** For firm performance I use the log of sales (i.e. \(\log(1+\text{sales})\)). I use this measure because it measures the total value created by all stakeholders that can be distributed amongst stakeholders, and sales growth often is an important goal for firms.

**Measures for Independent Variables**

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5 For the main analyses reported in this paper I only use observations with positive growth as growth has different main motivations and problems than in decline. Furthermore, in these two distinct organizational processes, stakeholders play a different role (for more information on the theoretical differences between these processes, see the literature review section). Nevertheless, results are identical for positive growth when using all observations and interacting the independent variables with a dummy for positive growth (this also clearly shows different relations and interactions for positive growth, as is theoretically expected).

6 The value creation for customers is not included in this, as this would require information on willingness to pay.
**Growth in operations:** For operations growth I use employee growth, as this variable captures well the growth in organizational complexity of the firm. The measure I use for employee growth is the employees in period $t$ over the employees in period $t-1$.

**Stakeholder orientation:** I will measure Stakeholder orientation using the Asset4 data. For each stakeholder, Asset4 has several items related to the extent to which the firm incorporates the information, resources, and needs of these individuals in their decision making processes. These can be used to investigate the extent to which the firm orients itself towards each stakeholder group. In this paper, I consider the firm’s customers, employees, local communities, suppliers, and shareholders. For each of these stakeholder groups, I use several binary items from the Asset4 database that were identified as relating to the process through which the firm manages these stakeholders. Examples of these items are: “does the company see suppliers as key business partners”, “Does the company monitor relationship with customers?”, or “Does the company set targets to improve relationship with local communities?”. Then, I take the average of all the items that relate to each of the stakeholders, and subsequently I standardize them by country and industry.

**Control Variables**

As controls I add the number of major acquisitions the firm conducted, since growth mode is important to the outcomes the firm receives, and I control for the size of the firm in terms of tangible fixed assets and employees, and for the firm’s labor productivity at time $t-1$. I add time dummies and firm fixed effects.

**Analyses**

To test the two hypotheses put forth in this paper, I start from a production function that has the Cobb-Douglas form:
\[ y_{it} = l_{it}^a k_{it}^b Z_{it}^c u_{it} \]

Where \( y_{it} \) is the sales of firm \( i \) at time \( t \), \( l_{it} \) is the number of employees, \( k_{it} \) is $1000 of tangible fixed assets, \( Z_{it} \) is a vector of control variables, and \( u_{it} \) is the error term. However, this function can be rewritten to include growth at each point in time

\[
\frac{1}{\ln(l_{it-1})} \left( \frac{l_{it} - 1}{l_{it-1}} \right)^{\alpha} k_{it}^b Z_{it}^c u_{it} = y_{it}
\]

Which can be rewritten into the following, where I split employee size in two terms, and differentiate between factor \( \alpha_1 \) and \( \alpha_2 \).

\[
\frac{y_{it}}{l_{it}} \left( \frac{l_{it} - 1}{l_{it-1}} \right) + \alpha_2 \log \left( \frac{l_{it}}{l_{it-1}} \right) \beta \log (k_{it}) \gamma \log (Z_{it}^c) u_{it}
\]

\[ \log(y_{it}) = \alpha_1 \log l_{it} \]

If growth in terms of employees would not have an impact on sales other than through the shift in the production function, this implies that \( \alpha_1 = \alpha_2 \). However, if this is not the case, this implies that the returns to growth in employees in a particular year are different than the returns to the stock of employees in that year. Then, we can test if the returns to growth are indeed inverse U shaped, as predicted in Hypothesis 1, and add a squared term.

\[
\frac{y_{it}}{l_{it}} \left( \frac{l_{it} - 1}{l_{it-1}} \right) + \alpha_2 \log \left( \frac{l_{it}}{l_{it-1}} \right) \alpha_3 \log \left( \frac{l_{it}}{l_{it-1}} \right)^2 \beta \log (k_{it}) \gamma \log (Z_{it}^c) u_{it}
\]

\[ \log(y_{it}) = \alpha_1 \log l_{it} \]
Then, to test for Hypothesis 2, I assume that $\alpha_n = \zeta_1 + \zeta_2 S + \nu_n$, so that the final model looks like this:

$$
\begin{align*}
\log (\hat{\log \left( \frac{\hat{l}_{it}}{l_{it-1}} \right)}) & = \alpha_1 \log \left( \frac{l_{it}}{l_{it-1}} \right) + \alpha_2 \log \left( \frac{l_{it}}{l_{it-1}} \right)^2 + \beta \log (k_{it}) + \gamma \log (Z_{it}) + u_{it} \\
\log (\hat{\log \left( \frac{\hat{l}_{it}}{l_{it-1}} \right)}) & = \beta \log (k_{it}) + \gamma \log (Z_{it}) + u_{it}
\end{align*}
$$

**Estimation**

To estimate the relationship between operations growth and value creation I use fixed effects estimation after Coad (2007b). However, several possible threats to causal identification exist that could potentially bias the effects I find. One concern is that firms select their rate of operations growth on the basis of their ability to create value from growth. Therefore, my findings should be interpreted as the average limits to value creation from growth in a particular period, given the firms’ ability to sense and seize opportunities. However, this possible threat would cause me to overestimate the average limits to value creation from growth. If firms with high growth rates are those firms that expect to create value even from high amounts of growth in one period, and the firm is accurate in their estimation, we should see no limits to growth as firms only grow until they reach diminishing marginal returns. Thus, this overestimation is of little concern to the identification of the existence of these limits, since evidence of a limit indicates that even firms that set their growth given their own characteristics, they still run into limits.
A second possible threat to identification is reverse causality. However, extensive research in economics has established that the way firms determine their growth is relatively random on many factors (Geroski, 2005), which means that this bias might only be small. Furthermore, in particular a stream of research in economics exists that have actively tried to identify a causal effect of profitability on future growth, and have found no evidence of such a causal linkage (Coad, 2009). Of course, this relationship is particularly focused on profitability, and the dependent variable in this study is sales, nevertheless, this seems to indicate that growth rates are random also conditional on prior firm outcomes.

To estimate the effect of stakeholder orientation on value creation from growth in Hypothesis 2, the firm’s stakeholder orientation might be related to a general managerial capability and to the firm’s ability to create value from growth. This is a spurious relationship, and left unchecked, could bias our estimates. To reduce these concerns, I use coarsened exact matching (Iacus & King, 2012; Iacus, King, & Porro, 2011), a technique that is built on the idea that if treatment is not randomly assigned (in my case stakeholder orientation) and we are worried about unobserved differences that affect both independent and dependent variable, it is best if we compare two firms that are similar on observables, assuming that they might also be more similar on unobservable characteristics. In order to use this procedure, first I identified the weights of each individual observation using coarsened exact matching to match the average characteristics for each of the three groups with low, medium and high stakeholder orientation. I used coarse matching with bins using Sturje’s rule on average firm age, average firm employees, average firm tangible fixed assets, and I matched exactly on industry and country.

RESULTS
Table 2 displays the summary statistics of the variables I use and the correlations. To test my hypotheses, I will now turn to the regression equations.

--- INSERT TABLE 2 ABOUT HERE ---

Results value creation from growth

In Table 3, Models (1)-(6) we see different specifications of the fixed effects models with logged sales as a dependent variable. In Model 1, we see a standard version of the Cobb-Douglas production function. The coefficients of employees and tangible fixed assets sum to 72, meaning that there are decreasing marginal returns to size in my sample in general. Furthermore, the model has a high $R^2$, meaning that sales can be well explained with this simple model (excluding fixed effects, it explains approximately 75% of the variance).

--- INSERT TABLE 3 ABOUT HERE ---

In Model (2), I replace the employee variable with lagged employees and employee growth, and here we see that even though mechanically these two variables should have the same coefficient, they do not, and this shows that on average the value created from recently added employees is lower than that from the stock of employees.
In Model (3), I add the squared term of employee growth. The main term is positive and significant, whereas the squared term is negative and significant. This is consistent with Hypothesis 1, that employee growth and sales are inverse-U shaped related. In Figure 1, we can see the magnitude of this effect. It follows that the maximum value firms can create from growth in a given year is about a twenty percent increase in sales, which is reached at about seventy-five percent employee growth. Furthermore, two firms of the same size at time t-1, one that grows fifty percent and the other grows one-hundred percent will have approximately the same sales increase. Even though seventy-five percent growth seems like a very unlikely event, and the chance of a firm to reach this level of growth in a given year is only about three percent, more than eleven percent of the firms in the sample had reached this level of growth at least once in the ten-year observation period, where the average length each firm was in the dataset was about seven years. Thus, in fact it is quite likely that a firm will reach this level of growth in its lifetime, especially when the firm is in operations for a long period of time. Furthermore, as mentioned before, I expect to overestimate the limits to growth, so that in reality the average amount of employee growth necessary to reach these limits is likely lower.

Results stakeholder interaction
In model (4), I add the dummies for medium and high stakeholder orientation, and its interaction with employee growth and employee growth squared. One dummy variable equals one for moderate levels of stakeholder orientation, where the score is between the 25\textsuperscript{th} and the 75\textsuperscript{th} percentile (moderate). The other dummy equals one for high levels of stakeholder orientation, where the score is above the 75\textsuperscript{th} percentile (high). I opt for using dummies because adding a four-way interaction with four continuous variables that are also collinear is difficult to interpret. Here, we can see that the interaction between employee growth and moderate stakeholder orientation is positive and significant, and the interaction between employee growth squared and moderate stakeholder orientation is negative but not significant. Instead, the interactions between employee growth and the high stakeholder orientation dummy are not significant. This is consistent with hypothesis 2. However, to be sure that this effect is not due to the fact that these three groups of firms are very different, in Model (5) I show the analysis only on the matched sample, where we see that the differences become even bigger, though less statistically significant. The results of this are graphed in Figure 2. Here, we see that for low levels of growth, stakeholder orientation does not seem to provide firms with an advantage, whereas firms that have either low or high levels of stakeholder orientation reach limits to growth much faster.

---- INSERT FIGURE 2 ABOUT HERE ----
To truly test for the hypothesis, and see at what level of growth firms with moderate stakeholder orientation start to outperform those firms that have either low or high stakeholder orientation, and the extent at which they do so, in Model (6) I only included the moderate stakeholder orientation dummy interactions, and graphed them in Figure 3. Here, we can see that firms with low and high stakeholder orientation reach their limits at about fifty percent growth, a value that more than eighteen percent of the firms in my sample achieve in on average seven years. Furthermore, we can see that firms with moderate levels of stakeholder orientation on average start to create more value from growth than firms with low or high levels of stakeholder orientation at twenty percent growth, a value that is only five percent over the average growth in the sample (for those firms that do grow). They statistically significantly start to do so from forty percent growth levels, where the marginal increase in sales from employee growth is more than three percentage points higher for firms with moderate stakeholder orientation. This increases up to about twenty-six percent for firms that double their size. Thus, the results support hypothesis 2.

---- INSERT FIGURE 3 ABOUT HERE ----

**Robustness**

To assess the robustness of my findings, I have undertaken several steps (Haans et al., 2015). First, when estimating an inverse U shaped relationship, it is important to identify that the inflection point lies within the sample. This can be seen from Figures 1 and 2. Furthermore, when running the regression on only the part of the sample that is characterized by the downwards sloping part of the curve, the relationship between the independent variable and the dependent variable has to be negative. In unreported analyses, I ran these tests, and they are indeed negative.
I also ran these tests with different specifications. For value creation, I also ran the same analyses with gross profit growth and ebit growth, which respectively represent the value that can be distributed amongst all stakeholders except customers, suppliers, and a select group of employees, and the value that is captured by the firm. Also these analyses are qualitatively the same, although less pronounced as the results for sales. This potentially means that firms that are more stakeholder oriented are able to build their sales more, but because they believe that value should be distributed fairly, do not capture as much of the value that they create. Lastly, I also ran the analysis for firm years in which firms do not engage in acquisition activity, in case the results are driven by firms growing via acquisitions, however, results also are similar for these firms. The limits to value creation are also visible in long term performance, although the limits to 3-year average value creation occur only for extreme levels of growth, they are there. More importantly, firms with medium levels of stakeholder orientation perform much better over this period.

Limitations
The results of this study should be interpreted as correlational and not causal. In an ideal experiment it would be possible to identify the causal structures underlying the correlations by randomly allocating both the level of organizational growth, and the amount of stakeholder orientation. However, this is not possible and in fact for only a small subset of firms both data on organizational growth, value creation, and stakeholder orientation is available. Therefore, I cannot exclude the possibility that a spurious relation exists, so that managerial capabilities jointly determine both stakeholder orientation, and the ability to convert operations growth into value creation. Nevertheless, the results of this study are robust to coarsened exact matching on stakeholder identification so that the firms with low, medium, and high stakeholder orientation I compare are similar on observables. If these firms that are similar in terms of average size, age, industry, country, prior labor productivity, and acquisition activity are also similar in terms of their general management capability, the results are close to a causal interpretation of the moderating effect of stakeholder orientation. However, in the least, the results show that stakeholder orientation is highly related to value creation from growth.

A second limitation is that it was not possible to directly measure the ability to sense and seize opportunities. Even though I theoretically argue that the mechanisms through which stakeholder orientation affects the ability to create value from growth run through the ability to sense and seize opportunities, this mediation remains implicit in my empirical models. For future research however, it would be a great step forward if the ability to sense and seize opportunities could be explicitly measured.
Lastly, this study only concerns organizational growth, whereas organizational decline is an equally common phenomenon in which stakeholders play a major role, albeit different from the role they play in organizational growth. Here, stakeholders may influence performance positively by providing the firm with slack, or negatively by disengaging with the firm. It would be interesting to investigate whether the extent to which a firm orients itself towards their stakeholders affects the probability of each of these reactions, and therefore should affect the firm’s ability to create value even in decline.

DISCUSSION AND CONCLUSION

In this paper I take a stakeholder based view of firm growth, in which I see a firm as a team of internal and external stakeholders that work together in order to create value, and each stakeholder is affected by growth in a different way. I argue and find that a limit exists to the amount of value that can be created through operations growth in a given period. Furthermore, the extent to which firms strategically integrate stakeholder interests and resources into their decision processes both enables and constrains value creation.

The main contribution of this paper is that it shows that stakeholders play a central role in organizational growth. Firms with moderate levels of stakeholder orientation are able to create more value from growth in any given period. Firms that do not strategically orient themselves towards their stakeholders are not able to leverage stakeholder resources, knowledge and social capital, whereas firms that do so too much, might neglect growth opportunities that involve non-current stakeholder parties.
This integrates stakeholder management theory with the resource-based view of the firm, as firms with medium levels of stakeholder orientation have more strategic options for value creating growth, which is one of the cornerstones of the resource based view (Kor & Mahoney, 2004). When firms perceive growth opportunities that require large amounts of growth, firms that have invested in stakeholder orientation, but do not do so too much are able to create more value from that growth. Thus, it seems that firm evolution in part depends on the extent to which firms orient themselves towards their stakeholders. Furthermore, it shows that a descriptively, stakeholder theory can explain both how stakeholder orientation enables and constrains value creation from growth (Phillips et al., 2010), and therefore that it can serve as a double edged sword in this context. Firms need to be aware of and balance both these two effects, so that they are able to leverage stakeholder knowledge, resources, and social capital, but do not fall in the trap of becoming overly focused on current stakeholders.
Second, this paper contributes to the literature on organizational growth. My findings suggest that firms can grow too fast, and therefore should not undertake too much growth in one period. This reiterates recent research on acquisitions (Capron, 2013; Laamanen & Keil, 2008), that finds that undertaking too many acquisitions in one period can have significant downsides, but shows that this generalizes to growth in general. Furthermore, my findings highlight that management decisions that are core to strategic management, such as how much to integrate stakeholders into firm decision making processes, can shift this limit. To research on general growth, that mostly does not differentiate between employee, asset, and sales growth, this study helps to distinguish these concepts both theoretically and empirically (Delmar, Davidsson, & Gartner, 2003). I find that employee growth is related to sales growth in a U-shaped fashion and argue that this is because employee growth is more closely related to operations growth, while sales growth is more related to value creation growth.

To the attention, or info processing, based view of the firm, my findings seem to point out that stakeholder processes will shape the attention of the firm (Crilly & Sloan, 2012), and that this will have important strategic and growth outcomes. Increased attention towards resources, knowledge and social capital of stakeholders might lead the firm to identify higher quality growth opportunities, but the firm may also become less willing to investigate growth opportunities that involve predominantly non-current stakeholders. The fact that moderate levels of stakeholder orientation increase the ability to create value from growth, whereas high levels of stakeholder orientation do not, suggests that both effects take place. Thus, the positive effects of increased consideration of stakeholder value creating resources, knowledge and social capital can only be fully realized when the firm remains open to combining these with resources, knowledge, and social capital from non-current stakeholder parties.
As a final consideration, this paper speaks to the literature on the measurement of value creation and value appropriation when considering a firm as a set of stakeholders. In recent years, large steps have been made in this direction (García-Castro & Aguilera, 2015; García-Castro & Lieberman, 2012; Lieberman, Balasubramanian, & García-Castro, 2013), however, the current state of the art of measurement of stakeholder value capture assumes away firm growth. Even though this contribution is valuable in and of itself, the current paper shows that stakeholders play a major role in the ability to create value from growth, and with that the need to identify how this value is distributed amongst stakeholders.

This paper did not only answer questions, but also opened up several research questions that could spur a promising research program. Guided by the payments perspective and stakeholder theory, in this paper I only focused on value creation by all stakeholders rather than value capture by the firm. However, for future research it is important also to look at the distribution of payments. In fact, in stakeholder theory the distribution of value – in particular it’s fairness - is of paramount importance to the firm’s ability to leverage the knowledge, social capital, and resources of stakeholders. Therefore, it is important to understand how growth affects the distribution of value across stakeholders, as this might have implications for the firms future value creation in general and its ability to grow. Furthermore, if we understand how and under what conditions the distribution of value across stakeholders affects the firm’s ability to create value from growth, we can understand better under what conditions the traditional shareholder view is more appropriate, and when the stakeholder view is more appropriate for understanding organizational growth.
This stakeholder based view of firm growth has informed our understanding of how firm growth rate influences value creation, and the importance of a strategic orientation towards stakeholders in this process. Firms do not often set growth rates that are too high. However, my results indicate that this does happen, suggesting that firms can create only limited value from growth in a given period; limits that are influenced by the extent to which firms orient themselves towards their stakeholders. Leveraging stakeholder knowledge, social capital, and resources through stakeholder orientation practices allows firms to sense and seize opportunities that they could otherwise not have sensed. Yet, firms should be wary of becoming too strongly focused on their current stakeholders, so that they fail to consider novel growth opportunities not recognized by their current team of stakeholders.

REFERENCES


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Outcome = log(1+Sales)
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1, ’ p<0.15
FIGURE 1: THE RELATIONSHIP BETWEEN EMPLOYEE GROWTH AND SALES

LOG SALES (INCLUDING 95% CONFIDENCE INTERVAL)
FIGURE 2: THE RELATIONSHIP BETWEEN EMPLOYEE GROWTH AND SALES FOR FIRMS WITH LOW, MODERATE AND HIGH STAKEHOLDER ORIENTATION

![Graph showing the relationship between employee growth and sales for firms with different stakeholder orientations.](image-url)
FIGURE 3: THE RELATIONSHIP BETWEEN EMPLOYEE GROWTH AND SALES GROWTH FOR FIRMS WITH MODERATE VS. LOW OR HIGH STAKEHOLDER ORIENTATION (PLUS STATISTICAL SIGNIFICANCE OF THE DIFFERENCE)