

# Diversification patterns and survival as firms mature

Small Business Economics

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## Abstract

We focus on the relationship between age and diversification patterns of German machine tool manufacturers in the post-war era. We distinguish between ‘minor diversification’ (adding a new product variation within a familiar submarket) and ‘major diversification’ (expanding the product portfolio into new submarkets). Our analysis reveals four main insights. First, we observe that firms have lower diversification rates as they grow older, and that eventually diversification rates even turn negative for old firms on average (where negative diversification corresponds to exit from certain product lines). Second, we find that product portfolios of larger firms tend to be more diversified. Third, with respect to consecutive diversification activities, quantile autoregression plots show that firms experiencing diversification in one period are unlikely to repeat this behavior in the following year. Fourth, survival estimations reveal that diversification activities reduce the risk of exit in general and to a varying degree at different ages. These results are interpreted using Penrosean growth theory.

## Keywords

Diversification patterns   Industry evolution   Firm age   Firm growth   Survival  
Machine tools

## JEL Classifications

L6   L11   L20   L25

## Notes

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## References

- Abernathy, W. J., & Utterback, J. M. (1978). Patterns of industrial restructuring. *Technology Review*, 80, 1–9.  
[Google Scholar](http://scholar.google.com/scholar_lookup?title=Patterns%20of%20industrial%20restructuring&author=WJ.%20Abernathy&author=JM.%20Utterback&journal=Technology%20Review&volume=80&pages=1-9&publication_year=1978) ([http://scholar.google.com/scholar\\_lookup?title=Patterns%20of%20industrial%20restructuring&author=WJ.%20Abernathy&author=JM.%20Utterback&journal=Technology%20Review&volume=80&pages=1-9&publication\\_year=1978](http://scholar.google.com/scholar_lookup?title=Patterns%20of%20industrial%20restructuring&author=WJ.%20Abernathy&author=JM.%20Utterback&journal=Technology%20Review&volume=80&pages=1-9&publication_year=1978))
- Aldrich, H. E., & Auster, E. R. (1986). Even dwarfs started small: Liabilities of age and size and their strategic implications. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 8, pp. 165–198). Greenwich: JAI.  
[Google Scholar](http://scholar.google.com/scholar_lookup?title=Even%20dwarfs%20started%20small%3A%20Liabilities%20of%20age%20and%20size%20and%20their%20strategic%20implications&author=HE.%20Aldrich&author=ER.%20Auster&pages=165-198&publication_year=1986) ([http://scholar.google.com/scholar\\_lookup?title=Even%20dwarfs%20started%20small%3A%20Liabilities%20of%20age%20and%20size%20and%20their%20strategic%20implications&author=HE.%20Aldrich&author=ER.%20Auster&pages=165-198&publication\\_year=1986](http://scholar.google.com/scholar_lookup?title=Even%20dwarfs%20started%20small%3A%20Liabilities%20of%20age%20and%20size%20and%20their%20strategic%20implications&author=HE.%20Aldrich&author=ER.%20Auster&pages=165-198&publication_year=1986))
- Ashburn, A. (1988). The machine tool industry: The crumbling foundation. In D. A. Hicks (Ed.), *Is new technology enough? Making and remaking of U.S. basic industry*. Washington, DC: American Enterprise Institute for Public Policy Research.  
[Google Scholar](http://scholar.google.com/scholar_lookup?title=The%20machine%20tool%20industry%3A%20The%20crumbling%20foundation&author=A.%20Ashburn&publication_year=1988) ([http://scholar.google.com/scholar\\_lookup?title=The%20machine%20tool%20industry%3A%20The%20crumbling%20foundation&author=A.%20Ashburn&publication\\_year=1988](http://scholar.google.com/scholar_lookup?title=The%20machine%20tool%20industry%3A%20The%20crumbling%20foundation&author=A.%20Ashburn&publication_year=1988))
- Azevedo, J. P. W. (2004). *grqreg: Stata module to graph the coefficients of a quantile regression*. Chestnut Hill: Department of Economics, Boston College.  
[Google Scholar](http://scholar.google.com/scholar_lookup?title=grqreg%3A%20Stata%20module%20to%20graph%20the%20coefficients%20of%20a%20quantile%20regression&author=JPW.%20Azevedo&publication_year=2004) ([http://scholar.google.com/scholar\\_lookup?title=grqreg%3A%20Stata%20module%20to%20graph%20the%20coefficients%20of%20a%20quantile%20regression&author=JPW.%20Azevedo&publication\\_year=2004](http://scholar.google.com/scholar_lookup?title=grqreg%3A%20Stata%20module%20to%20graph%20the%20coefficients%20of%20a%20quantile%20regression&author=JPW.%20Azevedo&publication_year=2004))
- Barney, J. B. (1997). *Gaining and sustaining competitive advantage*. Reading: Addison-Wesley.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Gaining%20and%20sustaining%20competitive%20advantage&author=JB.%20Barney&publication\\_year=1997](http://scholar.google.com/scholar_lookup?title=Gaining%20and%20sustaining%20competitive%20advantage&author=JB.%20Barney&publication_year=1997))

Barron, D. N., West, E., & Hannan, M. T. (1994). A time to growth and a time to die: Growth and mortality of credit unions in New York, 1914–1990. *American Journal of Sociology*, 100(2), 381–421.

CrossRef (<https://doi.org/10.1086/230541>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=A%20time%20to%20growth%20and%20a%20time%20to%20die%3A%20Growth%20and%20mortality%20of%20credit%20unions%20in%20New%20York%2C%201914%2E2%80%931990&author=DN.%20Barron&author=E.%20West&author=MT.%20Hannan&journal=American%20Journal%20of%20Sociology&volume=100&issue=2&pages=381-421&publication\\_year=1994](http://scholar.google.com/scholar_lookup?title=A%20time%20to%20growth%20and%20a%20time%20to%20die%3A%20Growth%20and%20mortality%20of%20credit%20unions%20in%20New%20York%2C%201914%2E2%80%931990&author=DN.%20Barron&author=E.%20West&author=MT.%20Hannan&journal=American%20Journal%20of%20Sociology&volume=100&issue=2&pages=381-421&publication_year=1994))

Bellone, F., Musso, P., Nesta, L., & Quere, M. (2008). Market selection along the firm life cycle. *Industrial and Corporate Change*, 17(4), 753–777.

CrossRef (<https://doi.org/10.1093/icc/dtn025>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Market%20selection%20along%20the%20firm%20life%20cycle&author=F.%20Bellone&author=P.%20Musso&author=L.%20Nesta&author=M.%20Quere&journal=Industrial%20and%20Corporate%20Change&volume=17&issue=4&pages=753-777&publication\\_year=2008](http://scholar.google.com/scholar_lookup?title=Market%20selection%20along%20the%20firm%20life%20cycle&author=F.%20Bellone&author=P.%20Musso&author=L.%20Nesta&author=M.%20Quere&journal=Industrial%20and%20Corporate%20Change&volume=17&issue=4&pages=753-777&publication_year=2008))

Bettis, R. A. (1981). Performance differences in related and unrelated diversified firms. *Strategic Management Journal*, 2, 379–394.

CrossRef (<https://doi.org/10.1002/smj.4250020406>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Performance%20differences%20in%20related%20and%20unrelated%20diversified%20firms&author=RA.%20Bettis&journal=Strategic%20Management%20Journal&volume=2&pages=379-394&publication\\_year=1981](http://scholar.google.com/scholar_lookup?title=Performance%20differences%20in%20related%20and%20unrelated%20diversified%20firms&author=RA.%20Bettis&journal=Strategic%20Management%20Journal&volume=2&pages=379-394&publication_year=1981))

Bottazzi, G., & Secchi, A. (2006). Gibrat's law and diversification. *Industrial and Corporate Change*, 37(2), 235–256.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Gibrat%E2%80%99s%20law%20and%20diversification&author=G.%20Bottazzi&author=A.%20Secchi&journal=Industrial%20and%20Corporate%20Change&volume=37&issue=2&pages=235-256&publication\\_year=2006](http://scholar.google.com/scholar_lookup?title=Gibrat%E2%80%99s%20law%20and%20diversification&author=G.%20Bottazzi&author=A.%20Secchi&journal=Industrial%20and%20Corporate%20Change&volume=37&issue=2&pages=235-256&publication_year=2006))

Brüderl, J., & Schüssler, R. (1990). Organizational mortality: The liability of newness and adolescence. *Administrative Science Quarterly*, 35, 530–547.

CrossRef (<https://doi.org/10.2307/2393316>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Organizational%20mortality%3A%20The%20liability%20of%20newness%20and%20adolescence&author=J.%20Br%C3%BCderl&author=R.%20Sch%C3%BCssler&journal=Administrative%20Science%20Quarterly&volume=35&pages=530-547&publication\\_year=1990](http://scholar.google.com/scholar_lookup?title=Organizational%20mortality%3A%20The%20liability%20of%20newness%20and%20adolescence&author=J.%20Br%C3%BCderl&author=R.%20Sch%C3%BCssler&journal=Administrative%20Science%20Quarterly&volume=35&pages=530-547&publication_year=1990))

Buenstorf, G., & Guenther, C. (2011). No place like home? Location choice and firm survival after the forced relocation in the German machine tool industry. *Industrial and Corporate Change*, 20, 1–28.

CrossRef (<https://doi.org/10.1093/icc/dtq055>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=No%20place%20like%20home%3F%20Location%20choice%20and%20firm%20su](http://scholar.google.com/scholar_lookup?title=No%20place%20like%20home%3F%20Location%20choice%20and%20firm%20su)

rvival%20after%20the%20forced%20relocation%20in%20the%20German%20machine  
%20tool%20industry&author=G.%20Buenstorf&author=C.%20Guenther&journal=Indu  
strial%20and%20Corporate%20Change&volume=20&pages=1-  
28&publication\_year=2011)

Capasso, M., Cefis, E., & Frenken, K. (2009). *Do some firms persistently outperform?*  
*LEM working paper series 2009/15*. Pisa: Sant'Anna School of Advanced Studies.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Do%20some%20firms%20persistently%20outperform%3F%20LEM%20working%20paper%20series%202009%2F15&author=M.%20Capasso&author=E.%20Cefis&author=K.%20Frenken&publication\\_year=2009](http://scholar.google.com/scholar_lookup?title=Do%20some%20firms%20persistently%20outperform%3F%20LEM%20working%20paper%20series%202009%2F15&author=M.%20Capasso&author=E.%20Cefis&author=K.%20Frenken&publication_year=2009))

Cefis, E., Marsili, O., & Schenk, H. (2009). The effects of mergers and acquisitions on the  
firm size distribution. *Journal of Evolutionary Economics*, 19, 1–20.

CrossRef (<https://doi.org/10.1007/s00191-008-0105-9>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=The%20effects%20of%20mergers%20and%20acquisitions%20on%20the%20firm%20size%20distribution&author=E.%20Cefis&author=O.%20Marsili&author=H.%20Schenk&journal=Journal%20of%20Evolutionary%20Economics&volume=19&pages=1-20&publication\\_year=2009](http://scholar.google.com/scholar_lookup?title=The%20effects%20of%20mergers%20and%20acquisitions%20on%20the%20firm%20size%20distribution&author=E.%20Cefis&author=O.%20Marsili&author=H.%20Schenk&journal=Journal%20of%20Evolutionary%20Economics&volume=19&pages=1-20&publication_year=2009))

Chang, S. J. (1996). An evolutionary perspective on diversification and corporate  
restructuring: Entry, exit and economic performance during 1981–1989. *Strategic  
Management Journal*, 17, 587–611.

CrossRef ([https://doi.org/10.1002/\(SICI\)1097-0266\(199610\)17%3A8<587%3A%3AAID-SMJ834>3.0.CO%3B2-1](https://doi.org/10.1002/(SICI)1097-0266(199610)17%3A8<587%3A%3AAID-SMJ834>3.0.CO%3B2-1))

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=An%20evolutionary%20perspective%20on%20diversification%20and%20corporat%20e%20restructuring%3A%20Entry%2C%20exit%20and%20economic%20performance%20during%201981%E2%80%931989&author=SJ.%20Chang&journal=Strategic%20Management%20Journal&volume=17&pages=587-611&publication\\_year=1996](http://scholar.google.com/scholar_lookup?title=An%20evolutionary%20perspective%20on%20diversification%20and%20corporat%20e%20restructuring%3A%20Entry%2C%20exit%20and%20economic%20performance%20during%201981%E2%80%931989&author=SJ.%20Chang&journal=Strategic%20Management%20Journal&volume=17&pages=587-611&publication_year=1996))

Chatterjee, S., & Wernerfelt, B. (1991). The link between resources and type of  
diversification: Theory and evidence. *Strategic Management Journal*, 12, 33–48.

CrossRef (<https://doi.org/10.1002/smj.4250120104>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=The%20link%20between%20resources%20and%20type%20of%20diversification%3A%20Theory%20and%20evidence&author=S.%20Chatterjee&author=B.%20Wernerfelt&journal=Strategic%20Management%20Journal&volume=12&pages=33-48&publication\\_year=1991](http://scholar.google.com/scholar_lookup?title=The%20link%20between%20resources%20and%20type%20of%20diversification%3A%20Theory%20and%20evidence&author=S.%20Chatterjee&author=B.%20Wernerfelt&journal=Strategic%20Management%20Journal&volume=12&pages=33-48&publication_year=1991))

Coad, A. (2007). A Closer Look at Serial Growth Rate Correlation. *Review of Industrial  
Organization*, 31, 69–82.

CrossRef (<https://doi.org/10.1007/s11151-007-9135-y>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=A%20Closer%20Look%20at%20Serial%20Growth%20Rate%20Correlation&author=A.%20Coad&journal=Review%20of%20Industrial%20Organization&volume=31&pages=69-82&publication\\_year=2007](http://scholar.google.com/scholar_lookup?title=A%20Closer%20Look%20at%20Serial%20Growth%20Rate%20Correlation&author=A.%20Coad&journal=Review%20of%20Industrial%20Organization&volume=31&pages=69-82&publication_year=2007))

Coad, A., & Hölzl, W. (2009). On the autocorrelation of growth rates. *Journal of  
Industry Competition and Trade*, 9, 139–166.

CrossRef (<https://doi.org/10.1007/s10842-009-0048-3>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=On%20the%20autocorrelation%20of%20growth%20rates&author=A.%20Coad&au](http://scholar.google.com/scholar_lookup?title=On%20the%20autocorrelation%20of%20growth%20rates&author=A.%20Coad&au))

thor=W.%20H%C3%B6lz&journal=Journal%20of%20Industry%20Competition%20and%20Trade&volume=9&pages=139-166&publication\_year=2009)

Coad, A., Segarra, A., & Teruel, M. (2012). Like milk or wine: Does firm performance improve with age? *Structural Change and Economic Dynamics*.

doi:[10.1016/j.strueco.2012.07.002](https://doi.org/10.1016/j.strueco.2012.07.002) (<https://doi.org/10.1016/j.strueco.2012.07.002>).

Coad, A., & Tamvada, J. P. (2012). Firm growth and barriers to growth among small firms in India. *Small Business Economics*, 39, 383–400.

[CrossRef](https://doi.org/10.1007/s11187-011-9318-7) (<https://doi.org/10.1007/s11187-011-9318-7>)

[Google Scholar](http://scholar.google.com/scholar_lookup?title=Firm%20growth%20and%20barriers%20to%20growth%20among%20small%20firms%20in%20India&author=A.%20Coad&author=JP.%20Tamvada&journal=Small%20Business%20Economics&volume=39&pages=383-400&publication_year=2012) ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Firm%20growth%20and%20barriers%20to%20growth%20among%20small%20firms%20in%20India&author=A.%20Coad&author=JP.%20Tamvada&journal=Small%20Business%20Economics&volume=39&pages=383-400&publication_year=2012)

[title=Firm%20growth%20and%20barriers%20to%20growth%20among%20small%20firms%20in%20India&author=A.%20Coad&author=JP.%20Tamvada&journal=Small%20Business%20Economics&volume=39&pages=383-400&publication\\_year=2012](http://scholar.google.com/scholar_lookup?title=Firm%20growth%20and%20barriers%20to%20growth%20among%20small%20firms%20in%20India&author=A.%20Coad&author=JP.%20Tamvada&journal=Small%20Business%20Economics&volume=39&pages=383-400&publication_year=2012))

Cox, D. R. (1972). Regression models and life-tables. *Journal of the Royal Statistical Society Series B*, 34, 187–220.

[Google Scholar](http://scholar.google.com/scholar_lookup?title=Regression%20models%20and%20life-tables&author=D.%20R.%20Cox&journal=Journal%20of%20the%20Royal%20Statistical%20Society%20Series%20B&volume=34&pages=187-220&publication_year=1972) ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Regression%20models%20and%20life-tables&author=D.%20R.%20Cox&journal=Journal%20of%20the%20Royal%20Statistical%20Society%20Series%20B&volume=34&pages=187-220&publication_year=1972)

[title=Regression%20models%20and%20life-tables&author=D.%20R.%20Cox&journal=Journal%20of%20the%20Royal%20Statistical%20Society%20Series%20B&volume=34&pages=187-220&publication\\_year=1972](http://scholar.google.com/scholar_lookup?title=Regression%20models%20and%20life-tables&author=D.%20R.%20Cox&journal=Journal%20of%20the%20Royal%20Statistical%20Society%20Series%20B&volume=34&pages=187-220&publication_year=1972))

Davidsson, P., & Delmar, F. (2006). High growth firms and their contribution to employment: The case of Sweden 1987–96. In P. Davidsson, F. Delmar, & J. Wiklund (Eds.), *Entrepreneurship and the growth of the firm*. Cheltenham: Edward Elgar.

[Google Scholar](http://scholar.google.com/scholar_lookup?title=High%20growth%20firms%20and%20their%20contribution%20to%20employment%3A%20The%20case%20of%20Sweden%201987%E2%80%9396&author=P.%20Davidsson&author=F.%20Delmar&publication_year=2006) ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=High%20growth%20firms%20and%20their%20contribution%20to%20employment%3A%20The%20case%20of%20Sweden%201987%E2%80%9396&author=P.%20Davidsson&author=F.%20Delmar&publication_year=2006)

[title=High%20growth%20firms%20and%20their%20contribution%20to%20employment%3A%20The%20case%20of%20Sweden%201987%E2%80%9396&author=P.%20Davidsson&author=F.%20Delmar&publication\\_year=2006](http://scholar.google.com/scholar_lookup?title=High%20growth%20firms%20and%20their%20contribution%20to%20employment%3A%20The%20case%20of%20Sweden%201987%E2%80%9396&author=P.%20Davidsson&author=F.%20Delmar&publication_year=2006))

Farjoun, M. (1994). Beyond industry boundaries: Human expertise, diversification, and resource-related industry groups. *Organization Science*, 5, 185–199.

[CrossRef](https://doi.org/10.1287/orsc.5.2.185) (<https://doi.org/10.1287/orsc.5.2.185>)

[Google Scholar](http://scholar.google.com/scholar_lookup?title=Beyond%20industry%20boundaries%3A%20Human%20expertise%2C%20diversification%2C%20and%20resource-related%20industry%20groups&author=M.%20Farjoun&journal=Organization%20Science&volume=5&pages=185-199&publication_year=1994) ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Beyond%20industry%20boundaries%3A%20Human%20expertise%2C%20diversification%2C%20and%20resource-related%20industry%20groups&author=M.%20Farjoun&journal=Organization%20Science&volume=5&pages=185-199&publication_year=1994)

[title=Beyond%20industry%20boundaries%3A%20Human%20expertise%2C%20diversification%2C%20and%20resource-related%20industry%20groups&author=M.%20Farjoun&journal=Organization%20Science&volume=5&pages=185-199&publication\\_year=1994](http://scholar.google.com/scholar_lookup?title=Beyond%20industry%20boundaries%3A%20Human%20expertise%2C%20diversification%2C%20and%20resource-related%20industry%20groups&author=M.%20Farjoun&journal=Organization%20Science&volume=5&pages=185-199&publication_year=1994))

Fleischer, M. (1997). *The inefficiency trap: Strategy failure in the German machine tool industry*. Berlin: Ed. Sigma.

[Google Scholar](http://scholar.google.com/scholar_lookup?title=The%20inefficiency%20trap%3A%20Strategy%20failure%20in%20the%20German%20machine%20tool%20industry&author=M.%20Fleischer&publication_year=1997) ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=The%20inefficiency%20trap%3A%20Strategy%20failure%20in%20the%20German%20machine%20tool%20industry&author=M.%20Fleischer&publication_year=1997)

[title=The%20inefficiency%20trap%3A%20Strategy%20failure%20in%20the%20German%20machine%20tool%20industry&author=M.%20Fleischer&publication\\_year=1997](http://scholar.google.com/scholar_lookup?title=The%20inefficiency%20trap%3A%20Strategy%20failure%20in%20the%20German%20machine%20tool%20industry&author=M.%20Fleischer&publication_year=1997))

Greiner, L. (1972). Evolution and revolution as organizations grow. *Harvard Business Review*, 50(4), 37–46.

[Google Scholar](http://scholar.google.com/scholar_lookup?title=Evolution%20and%20revolution%20as%20organizations%20grow&author=L.%20Greiner&journal=Harvard%20Business%20Review&volume=50&issue=4&pages=37-46&publication_year=1972) ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Evolution%20and%20revolution%20as%20organizations%20grow&author=L.%20Greiner&journal=Harvard%20Business%20Review&volume=50&issue=4&pages=37-46&publication_year=1972)

[title=Evolution%20and%20revolution%20as%20organizations%20grow&author=L.%20Greiner&journal=Harvard%20Business%20Review&volume=50&issue=4&pages=37-46&publication\\_year=1972](http://scholar.google.com/scholar_lookup?title=Evolution%20and%20revolution%20as%20organizations%20grow&author=L.%20Greiner&journal=Harvard%20Business%20Review&volume=50&issue=4&pages=37-46&publication_year=1972))

Guenther, C. (2009). Structural change in the German machine tool market - An empirical investigation of technological, regional, and firm-specific developments. Dissertation, Friedrich-Schiller-Universität, Jena.

Google Scholar (<https://scholar.google.com/scholar?q=Guenther%2C%20C.%20%282009%29.%20Structural%20change%20in%20the%20German%20machine%20tool%20market%20-%20An%20empirical%20investigation%20of%20technological%2C%20regional%2C%20and%20firm-specific%20developments.%20Dissertation%2C%20Friedrich-Schiller-Universit%C3%A4t%2C%20Jena.>)

Headd, B. (2003). Redefining business success: Distinguishing between closure and failure. *Small Business Economics*, 21, 51–61.

CrossRef (<https://doi.org/10.1023/A%3A1024433630958>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Redefining%20business%20success%3A%20Distinguishing%20between%20closure%20and%20failure&author=B.%20Headd&journal=Small%20Business%20Economics&vvolume=21&pages=51-61&publication\\_year=2003](http://scholar.google.com/scholar_lookup?title=Redefining%20business%20success%3A%20Distinguishing%20between%20closure%20and%20failure&author=B.%20Headd&journal=Small%20Business%20Economics&vvolume=21&pages=51-61&publication_year=2003))

Hill, C. W. L., & Snell, S. A. (1988). External control, corporate strategy, and firm performance in research-intensive industries. *Strategic Management Journal*, 9, 577–590.

CrossRef (<https://doi.org/10.1002/smj.4250090605>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=External%20control%2C%20corporate%20strategy%2C%20and%20firm%20performance%20in%20research-intensive%20industries&author=CWL.%20Hill&author=SA.%20Snell&journal=Strategic%20Management%20Journal&volume=9&pages=577-590&publication\\_year=1988](http://scholar.google.com/scholar_lookup?title=External%20control%2C%20corporate%20strategy%2C%20and%20firm%20performance%20in%20research-intensive%20industries&author=CWL.%20Hill&author=SA.%20Snell&journal=Strategic%20Management%20Journal&volume=9&pages=577-590&publication_year=1988))

Huergo, E., & Jaumandreu, J. (2004). How does probability of innovation change with firm age? *Small Business Economics*, 22, 193–207.

CrossRef (<https://doi.org/10.1023/B%3ASBEJ.0000022220.07366.b5>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=How%20does%20probability%20of%20innovation%20change%20with%20firm%20age%3F&author=E.%20Huergo&author=J.%20Jaumandreu&journal=Small%20Business%20Economics&volume=22&pages=193-207&publication\\_year=2004](http://scholar.google.com/scholar_lookup?title=How%20does%20probability%20of%20innovation%20change%20with%20firm%20age%3F&author=E.%20Huergo&author=J.%20Jaumandreu&journal=Small%20Business%20Economics&volume=22&pages=193-207&publication_year=2004))

Hymer, S., & Pashigian, P. (1962). Firm size and rate of growth. *Journal of Political Economy*, 70(6), 556–569.

CrossRef (<https://doi.org/10.1086/258716>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Firm%20size%20and%20rate%20of%20growth&author=S.%20Hymer&author=P.%20Pashigian&journal=Journal%20of%20Political%20Economy&volume=70&issue=6&pages=556-569&publication\\_year=1962](http://scholar.google.com/scholar_lookup?title=Firm%20size%20and%20rate%20of%20growth&author=S.%20Hymer&author=P.%20Pashigian&journal=Journal%20of%20Political%20Economy&volume=70&issue=6&pages=556-569&publication_year=1962))

Jacobs, J. (1969). *The economy of cities*. New York: Vintage Books.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=The%20economy%20of%20cities&author=J.%20Jacobs&publication\\_year=1969](http://scholar.google.com/scholar_lookup?title=The%20economy%20of%20cities&author=J.%20Jacobs&publication_year=1969))

Kandilov, I. T. (2009). Do exporters pay higher wages? Plant-level evidence from an export refund in Chile. *World Bank Economic Review*, 23, 269–294.

CrossRef (<https://doi.org/10.1093/wber/lhp004>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Do%20exporters%20pay%20higher%20wages%3F%20Plant-level%20evidence%20from%20an%20export%20refund%20in%20Chile&author=IT.%20Kandilov&journal=World%20Bank%20Economic%20Review&volume=23&pages=269-294&publication\\_year=2009](http://scholar.google.com/scholar_lookup?title=Do%20exporters%20pay%20higher%20wages%3F%20Plant-level%20evidence%20from%20an%20export%20refund%20in%20Chile&author=IT.%20Kandilov&journal=World%20Bank%20Economic%20Review&volume=23&pages=269-294&publication_year=2009))

Klepper, S. (1996). Entry, exit, growth, and innovation over the product life cycle.

*American Economic Review*, 86, 562–583.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Entry%2C%20exit%2C%20growth%2C%20and%20innovation%20over%20the%20product%20life%20cycle&author=S.%20Klepper&journal=American%20Economic%20Review&volume=86&pages=562-583&publication_year=1996)

[title=Entry%2C%20exit%2C%20growth%2C%20and%20innovation%20over%20the%20product%20life%20cycle&author=S.%20Klepper&journal=American%20Economic%20Review&volume=86&pages=562-583&publication\\_year=1996](http://scholar.google.com/scholar_lookup?title=Entry%2C%20exit%2C%20growth%2C%20and%20innovation%20over%20the%20product%20life%20cycle&author=S.%20Klepper&journal=American%20Economic%20Review&volume=86&pages=562-583&publication_year=1996))

Klepper, S. (1997). Industry life cycles. *Industrial and Corporate Change*, 6, 145–181.

CrossRef (<https://doi.org/10.1093/icc/6.1.145>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Industry%20life%20cycles&author=S.%20Klepper&journal=Industrial%20and%20Corporate%20Change&volume=6&pages=145-181&publication_year=1997)

[title=Industry%20life%20cycles&author=S.%20Klepper&journal=Industrial%20and%20Corporate%20Change&volume=6&pages=145-181&publication\\_year=1997](http://scholar.google.com/scholar_lookup?title=Industry%20life%20cycles&author=S.%20Klepper&journal=Industrial%20and%20Corporate%20Change&volume=6&pages=145-181&publication_year=1997))

Klepper, S., & Sleeper, S. (2005). Entry by spinoffs. *Management Science*, 51, 1291–1306.

CrossRef (<https://doi.org/10.1287/mnsc.1050.0411>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Entry%20by%20spinoffs&author=S.%20Klepper&author=S.%20Sleeper&journal=Management%20Science&volume=51&pages=1291-1306&publication_year=2005)

[title=Entry%20by%20spinoffs&author=S.%20Klepper&author=S.%20Sleeper&journal=Management%20Science&volume=51&pages=1291-1306&publication\\_year=2005](http://scholar.google.com/scholar_lookup?title=Entry%20by%20spinoffs&author=S.%20Klepper&author=S.%20Sleeper&journal=Management%20Science&volume=51&pages=1291-1306&publication_year=2005))

Klepper, S., & Thompson, P. (2006). Submarkets and the evolution of market structure.

*Rand Journal of Economics*, 37(4), 861–886.

CrossRef (<https://doi.org/10.1111/j.1756-2171.2006.tb00061.x>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Submarkets%20and%20the%20evolution%20of%20market%20structure&author=S.%20Klepper&author=P.%20Thompson&journal=Rand%20Journal%20of%20Economics&volume=37&issue=4&pages=861-886&publication_year=2006)

[title=Submarkets%20and%20the%20evolution%20of%20market%20structure&author=S.%20Klepper&author=P.%20Thompson&journal=Rand%20Journal%20of%20Economics&volume=37&issue=4&pages=861-886&publication\\_year=2006](http://scholar.google.com/scholar_lookup?title=Submarkets%20and%20the%20evolution%20of%20market%20structure&author=S.%20Klepper&author=P.%20Thompson&journal=Rand%20Journal%20of%20Economics&volume=37&issue=4&pages=861-886&publication_year=2006))

Lee, Y., Amaral, L. A. N., Canning, D., Meyer, M., & Stanley, H. E. (1998). Universal features in the growth dynamics of complex organizations. *Physical Review Letters*, 81, 3275–3278.

CrossRef (<https://doi.org/10.1103/PhysRevLett.81.3275>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Universal%20features%20in%20the%20growth%20dynamics%20of%20complex%20organizations&author=Y.%20Lee&author=LAN.%20Amaral&author=D.%20Canning&author=M.%20Meyer&author=HE.%20Stanley&journal=Physical%20Review%20Letters&volume=81&pages=3275-3278&publication_year=1998)

[title=Universal%20features%20in%20the%20growth%20dynamics%20of%20complex%20organizations&author=Y.%20Lee&author=LAN.%20Amaral&author=D.%20Canning&author=M.%20Meyer&author=HE.%20Stanley&journal=Physical%20Review%20Letters&volume=81&pages=3275-3278&publication\\_year=1998](http://scholar.google.com/scholar_lookup?title=Universal%20features%20in%20the%20growth%20dynamics%20of%20complex%20organizations&author=Y.%20Lee&author=LAN.%20Amaral&author=D.%20Canning&author=M.%20Meyer&author=HE.%20Stanley&journal=Physical%20Review%20Letters&volume=81&pages=3275-3278&publication_year=1998))

Lockett, A., Wiklund, J., Davidsson, P., & Girma, S. (2010). Organic and acquisitive growth: Re-examining, testing and extending Penrose's growth theory. *Journal of Management Studies*, 48, 48–74.

CrossRef (<https://doi.org/10.1111/j.1467-6486.2009.00879.x>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=Organic%20and%20acquisitive%20growth%3A%20Re-examining%2C%20testing%20and%20extending%20Penrose%E2%80%99s%20growth%20theory&author=A.%20Lockett&author=J.%20Wiklund&author=P.%20Davidsson&author=S.%20Girma&journal=Journal%20of%20Management%20Studies&volume=48&pages=48-74&publication_year=2010)

[title=Organic%20and%20acquisitive%20growth%3A%20Re-examining%2C%20testing%20and%20extending%20Penrose%E2%80%99s%20growth%20theory&author=A.%20Lockett&author=J.%20Wiklund&author=P.%20Davidsson&author=S.%20Girma&journal=Journal%20of%20Management%20Studies&volume=48&pages=48-74&publication\\_year=2010](http://scholar.google.com/scholar_lookup?title=Organic%20and%20acquisitive%20growth%3A%20Re-examining%2C%20testing%20and%20extending%20Penrose%E2%80%99s%20growth%20theory&author=A.%20Lockett&author=J.%20Wiklund&author=P.%20Davidsson&author=S.%20Girma&journal=Journal%20of%20Management%20Studies&volume=48&pages=48-74&publication_year=2010))

Marris, R. (1964). *The economic theory of managerial capitalism*. London: Macmillan.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?](http://scholar.google.com/scholar_lookup?title=The%20economic%20theory%20of%20managerial%20capitalism&author=R.%20Marris&publication_year=1964)

[title=The%20economic%20theory%20of%20managerial%20capitalism&author=R.%20Marris&publication\\_year=1964](http://scholar.google.com/scholar_lookup?title=The%20economic%20theory%20of%20managerial%20capitalism&author=R.%20Marris&publication_year=1964))

Marshall, A. (1890). *Principles of economics*. London: Macmillan.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Principles%20of%20economics&author=A.%20Marshall&publication\\_year=1890](http://scholar.google.com/scholar_lookup?title=Principles%20of%20economics&author=A.%20Marshall&publication_year=1890))

Matia, K., Fu, D., Buldyrev, S., Pammolli, F., Riccaboni, M., & Stanley, H. (2004). Statistical properties of business firms structure and growth. *Europhysics Letters*, 67, 498–503.

CrossRef (<https://doi.org/10.1209/epl/i2004-10070-4>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Statistical%20properties%20of%20business%20firms%20structure%20and%20growth&author=K.%20Matia&author=D.%20Fu&author=S.%20Buldyrev&author=F.%20Pammolli&author=M.%20Riccaboni&author=H.%20Stanley&journal=Europhysics%20Letters&volume=67&pages=498-503&publication\\_year=2004](http://scholar.google.com/scholar_lookup?title=Statistical%20properties%20of%20business%20firms%20structure%20and%20growth&author=K.%20Matia&author=D.%20Fu&author=S.%20Buldyrev&author=F.%20Pammolli&author=M.%20Riccaboni&author=H.%20Stanley&journal=Europhysics%20Letters&volume=67&pages=498-503&publication_year=2004))

McKelvie, A., & Wiklund, J. (2010). Advancing firm growth research: A focus on growth mode instead of growth rate. *Entrepreneurship Theory and Practice*, 34, 261–288.

CrossRef (<https://doi.org/10.1111/j.1540-6520.2010.00375.x>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Advancing%20firm%20growth%20research%3A%20A%20focus%20on%20growth%20mode%20instead%20of%20growth%20rate&author=A.%20McKelvie&author=J.%20Wiklund&journal=Entrepreneurship%20Theory%20and%20Practice&volume=34&pages=261-288&publication\\_year=2010](http://scholar.google.com/scholar_lookup?title=Advancing%20firm%20growth%20research%3A%20A%20focus%20on%20growth%20mode%20instead%20of%20growth%20rate&author=A.%20McKelvie&author=J.%20Wiklund&journal=Entrepreneurship%20Theory%20and%20Practice&volume=34&pages=261-288&publication_year=2010))

Montgomery, C. (1994). Corporate diversification. *Journal of Economic Perspectives*, 8, 163–178.

CrossRef (<https://doi.org/10.1257/jep.8.3.163>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Corporate%20diversification&author=C.%20Montgomery&journal=Journal%20of%20Economic%20Perspectives&volume=8&pages=163-178&publication\\_year=1994](http://scholar.google.com/scholar_lookup?title=Corporate%20diversification&author=C.%20Montgomery&journal=Journal%20of%20Economic%20Perspectives&volume=8&pages=163-178&publication_year=1994))

Montgomery, C., & Hariharan, S. (1991). Diversified entry by established firms. *Journal of Economic Behavior and Organization*, 15, 71–89.

CrossRef ([https://doi.org/10.1016/0167-2681\(91\)90005-I](https://doi.org/10.1016/0167-2681(91)90005-I))

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Diversified%20entry%20by%20established%20firms&author=C.%20Montgomery&author=S.%20Hariharan&journal=Journal%20of%20Economic%20Behavior%20and%20Organization&volume=15&pages=71-89&publication\\_year=1991](http://scholar.google.com/scholar_lookup?title=Diversified%20entry%20by%20established%20firms&author=C.%20Montgomery&author=S.%20Hariharan&journal=Journal%20of%20Economic%20Behavior%20and%20Organization&volume=15&pages=71-89&publication_year=1991))

Mosakowski, E. (1997). Strategy making under causal ambiguity: Conceptual issues and empirical evidence. *Organization Science*, 8, 414–442.

CrossRef (<https://doi.org/10.1287/orsc.8.4.414>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Strategy%20making%20under%20causal%20ambiguity%3A%20Conceptual%20issues%20and%20empirical%20evidence&author=E.%20Mosakowski&journal=Organization%20Science&volume=8&pages=414-442&publication\\_year=1997](http://scholar.google.com/scholar_lookup?title=Strategy%20making%20under%20causal%20ambiguity%3A%20Conceptual%20issues%20and%20empirical%20evidence&author=E.%20Mosakowski&journal=Organization%20Science&volume=8&pages=414-442&publication_year=1997))

Palich, L. E., Cardinal, L. B., & Miller, C. C. (2000). Curvilinearity in the diversification–performance linkage: An examination of over three decades of research. *Strategic Management Journal*, 21, 155–174.

CrossRef ([https://doi.org/10.1002/\(SICI\)1097-0266\(200002\)21:3A2<155:3A3AID-SMJ82>3.0.CO;3B2-2](https://doi.org/10.1002/(SICI)1097-0266(200002)21:3A2<155:3A3AID-SMJ82>3.0.CO;3B2-2))

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Curvilinearity%20in%20the%20diversification%E2%80%93performance%20linkage%3A%20An%20examination%20of%20over%20three%20decades%20of%20research&author=LE.%20Palich&author=LB.%20Cardinal&author=CC.%20Miller&journal=Strategic%20Management%20Journal](http://scholar.google.com/scholar_lookup?title=Curvilinearity%20in%20the%20diversification%E2%80%93performance%20linkage%3A%20An%20examination%20of%20over%20three%20decades%20of%20research&author=LE.%20Palich&author=LB.%20Cardinal&author=CC.%20Miller&journal=Strategic%20Management%20Journal))



tegic%20Management%20Journal&volume=21&pages=155-174&publication\_year=2000)

Penrose, E. T. (1959/1995). *The theory of the growth of the firm*. Oxford: Oxford University Press.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=The%20theory%20of%20the%20growth%20of%20the%20firm&author=ET.%20Penrose&publication\\_year=1959%2F1995](http://scholar.google.com/scholar_lookup?title=The%20theory%20of%20the%20growth%20of%20the%20firm&author=ET.%20Penrose&publication_year=1959%2F1995))

Robin, J. A., & Wiersema, C. F. (2003). The measurement of corporate portfolio strategy: Analysis of the content validity of related diversification indexes. *Strategic Management Journal*, 24, 39–59.

CrossRef (<https://doi.org/10.1002/smj.282>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=The%20measurement%20of%20corporate%20portfolio%20strategy%3A%20Analysis%20of%20the%20content%20validity%20of%20related%20diversification%20indexes&author=JA.%20Robin&author=CF.%20Wiersema&journal=Strategic%20Management%20Journal&volume=24&pages=39-59&publication\\_year=2003](http://scholar.google.com/scholar_lookup?title=The%20measurement%20of%20corporate%20portfolio%20strategy%3A%20Analysis%20of%20the%20content%20validity%20of%20related%20diversification%20indexes&author=JA.%20Robin&author=CF.%20Wiersema&journal=Strategic%20Management%20Journal&volume=24&pages=39-59&publication_year=2003))

Rumelt, R. P. (1982). Diversification strategy and profitability. *Strategic Management Journal*, 3, 359–369.

CrossRef (<https://doi.org/10.1002/smj.4250030407>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Diversification%20strategy%20and%20profitability&author=RP.%20Rumelt&journal=Strategic%20Management%20Journal&volume=3&pages=359-369&publication\\_year=1982](http://scholar.google.com/scholar_lookup?title=Diversification%20strategy%20and%20profitability&author=RP.%20Rumelt&journal=Strategic%20Management%20Journal&volume=3&pages=359-369&publication_year=1982))

Sciberras, E., & Payne, B. D. (1985). *Machine tool industry. Technical change and the international competitiveness*. Harlow: Longman.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Machine%20tool%20industry.%20Technical%20change%20and%20the%20international%20competitiveness&author=E.%20Sciberras&author=BD.%20Payne&publication\\_year=1985](http://scholar.google.com/scholar_lookup?title=Machine%20tool%20industry.%20Technical%20change%20and%20the%20international%20competitiveness&author=E.%20Sciberras&author=BD.%20Payne&publication_year=1985))

Tanriverdi, H., & Venkatraman, N. (2005). Knowledge relatedness and the performance of multibusiness firms. *Strategic Management Journal*, 26, 97–119.

CrossRef (<https://doi.org/10.1002/smj.435>)

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Knowledge%20relatedness%20and%20the%20performance%20of%20multibusiness%20firms&author=H.%20Tanriverdi&author=N.%20Venkatraman&journal=Strategic%20Management%20Journal&volume=26&pages=97-119&publication\\_year=2005](http://scholar.google.com/scholar_lookup?title=Knowledge%20relatedness%20and%20the%20performance%20of%20multibusiness%20firms&author=H.%20Tanriverdi&author=N.%20Venkatraman&journal=Strategic%20Management%20Journal&volume=26&pages=97-119&publication_year=2005))

Teece, D. J., Rumelt, R., Dosi, G., & Winter, S. (1994). Understanding corporate coherence: Theory and evidence. *Journal of Economic Behavior & Organization*, 23, 1–30.

CrossRef ([https://doi.org/10.1016/0167-2681\(94\)90094-9](https://doi.org/10.1016/0167-2681(94)90094-9))

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Understanding%20corporate%20coherence%3A%20Theory%20and%20evidence&author=DJ.%20Teece&author=R.%20Rumelt&author=G.%20Dosi&author=S.%20Winter&journal=Journal%20of%20Economic%20Behavior%20%26%20Organization&volume=23&pages=1-30&publication\\_year=1994](http://scholar.google.com/scholar_lookup?title=Understanding%20corporate%20coherence%3A%20Theory%20and%20evidence&author=DJ.%20Teece&author=R.%20Rumelt&author=G.%20Dosi&author=S.%20Winter&journal=Journal%20of%20Economic%20Behavior%20%26%20Organization&volume=23&pages=1-30&publication_year=1994))

Teruel-Carrizosa, M. (2010). Gibrat's law and the learning process. *Small Business Economics*, 34, 355–373.

CrossRef (<https://doi.org/10.1007/s11187-008-9127-9>)  
Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Gibrat%E2%80%99s%20law%20and%20the%20learning%20process&author=M.%20Teruel-Carrizosa&journal=Small%20Business%20Economics&volume=34&pages=355-373&publication\\_year=2010](http://scholar.google.com/scholar_lookup?title=Gibrat%E2%80%99s%20law%20and%20the%20learning%20process&author=M.%20Teruel-Carrizosa&journal=Small%20Business%20Economics&volume=34&pages=355-373&publication_year=2010))

Utterback, J. M., & Suarez, F. F. (1993). Innovation, competition, and industry structure. *Research Policy*, 22, 1–21.

CrossRef ([https://doi.org/10.1016/0048-7333\(93\)90030-L](https://doi.org/10.1016/0048-7333(93)90030-L))  
Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Innovation%2C%20competition%2C%20and%20industry%20structure&author=J.M.%20Utterback&author=FF.%20Suarez&journal=Research%20Policy&volume=22&pages=1-21&publication\\_year=1993](http://scholar.google.com/scholar_lookup?title=Innovation%2C%20competition%2C%20and%20industry%20structure&author=J.M.%20Utterback&author=FF.%20Suarez&journal=Research%20Policy&volume=22&pages=1-21&publication_year=1993))

VDW (2005). *The German machine tool industry in 2004*. Frankfurt/Main: Verein Deutscher Werkzeugmaschinenfabriken e.V.

Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=The%20German%20machine%20tool%20industry%20in%202004&publication\\_year=2005](http://scholar.google.com/scholar_lookup?title=The%20German%20machine%20tool%20industry%20in%202004&publication_year=2005))

Wan, W. P., Hoskisson, R. E., Short, J. C., & Yiu, D. W. (2011). Resource-based theory and corporate diversification: Accomplishments and opportunities. *Journal of Management*, 37, 1335–1368.

CrossRef (<https://doi.org/10.1177/0149206310391804>)  
Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Resource-based%20theory%20and%20corporate%20diversification%3A%20Accomplishments%20and%20opportunities&author=WP.%20Wan&author=RE.%20Hoskisson&author=JC.%20Short&author=DW.%20Yiu&journal=Journal%20of%20Management&volume=37&pages=1335-1368&publication\\_year=2011](http://scholar.google.com/scholar_lookup?title=Resource-based%20theory%20and%20corporate%20diversification%3A%20Accomplishments%20and%20opportunities&author=WP.%20Wan&author=RE.%20Hoskisson&author=JC.%20Short&author=DW.%20Yiu&journal=Journal%20of%20Management&volume=37&pages=1335-1368&publication_year=2011))

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5, 171–180.

CrossRef (<https://doi.org/10.1002/smj.4250050207>)  
Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=A%20resource-based%20view%20of%20the%20firm&author=B.%20Wernerfelt&journal=Strategic%20Management%20Journal&volume=5&pages=171-180&publication\\_year=1984](http://scholar.google.com/scholar_lookup?title=A%20resource-based%20view%20of%20the%20firm&author=B.%20Wernerfelt&journal=Strategic%20Management%20Journal&volume=5&pages=171-180&publication_year=1984))

Wieandt, A. (1994). Innovation and the creation, development and destruction of markets in the world machine tool industry. *Small Business Economics*, 6, 421–437.

CrossRef (<https://doi.org/10.1007/BF01064857>)  
Google Scholar ([http://scholar.google.com/scholar\\_lookup?title=Innovation%20and%20the%20creation%2C%20development%20and%20destruction%20of%20markets%20in%20the%20world%20machine%20tool%20industry&author=A.%20Wieandt&journal=Small%20Business%20Economics&volume=6&pages=421-437&publication\\_year=1994](http://scholar.google.com/scholar_lookup?title=Innovation%20and%20the%20creation%2C%20development%20and%20destruction%20of%20markets%20in%20the%20world%20machine%20tool%20industry&author=A.%20Wieandt&journal=Small%20Business%20Economics&volume=6&pages=421-437&publication_year=1994))

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