Data Article

Survey data on organizational culture and entrepreneurial orientation in German family firms

Christopher Arz, Andreas Kuckertz*

Institute of Marketing and Management, Entrepreneurship (570 C), University of Hohenheim, Wollgrasweg 49, 70599 Stuttgart, Germany

ARTICLE INFO

Article history:
Received 1 December 2018
Received in revised form 30 January 2019
Accepted 5 March 2019
Available online 28 March 2019

ABSTRACT

This data article describes a dataset of 208 cases representing assessments of entrepreneurial orientation and organizational culture variables obtained from a web-based survey addressing owners and/or CEOs of German family firms. It includes data on five dimensions of entrepreneurial orientation (innovativeness, proactiveness, risk taking, autonomy, competitive aggressiveness), three dimensions of long-term orientation (futurity, perseverance, continuity), six dimensions of stewardship climate (organizational identification, collectivist orientation, power distance, involvement orientation, use of personal power, intrinsic motivation), three dimensions of learning orientation (commitment to learning, shared vision, open-mindedness), willingness to change, error management culture, and family commitment culture. Additionally, firm-level attributes (e.g., industry, age, size) and top management-level characteristics (e.g., generational involvement, involvement of the founder) are included.

© 2019 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

* Corresponding author.
E-mail addresses: christopher.arz@uni-hohenheim.de (C. Arz), andreas.kuckertz@uni-hohenheim.de (A. Kuckertz).
Understanding family firms is an important area of investigation in management research and economics [1]. The German economy is a suitable setting to analyze such businesses, given that it is largely shaped by small and medium sized enterprises (“German Mittelstand”), which are often family owned. Equally, many larger corporations headquartered in Germany are controlled by families as well. These firms are often said to be characterized by a specific organizational culture determined by the family in control—a phenomenon, which has not yet been sufficiently understood and which allows for a plethora of research opportunities [2].

Against this background, researchers collected data to illustrate organizational culture and entrepreneurial orientation in German family firms. To aid data collection, a family firm is defined as:

- a privately held firm where ownership resides within one family,
- where this family is represented in the management team and substantially influences the key decisions and direction of the firm, and
- the business is perceived to be a family firm by the leading representative of the firm.

The dataset contains self-reported responses of individual study participants. Table 1 summarizes the variables in the dataset. All variables represent either family-, firm- or top management-level concepts or attributes that have been assessed by the owner and/or CEO of a particular German family firm (key informant approach).

Table 2 contains the descriptive statistics of the variables in the data set and reports the results of appropriate validity and reliability tests.

---

1. Data

Understanding family firms is an important area of investigation in management research and economics [1]. The German economy is a suitable setting to analyze such businesses, given that it is largely shaped by small and medium sized enterprises (“German Mittelstand”), which are quite often family owned. Equally, many larger corporations headquartered in Germany are controlled by families as well. These firms are often said to be characterized by a specific organizational culture determined by the family in control—a phenomenon, which has not yet been sufficiently understood and which allows for a plethora of research opportunities [2].

Against this background, researchers collected data to illustrate organizational culture and entrepreneurial orientation in German family firms. To aid data collection, a family firm is defined as:

- a privately held firm where ownership resides within one family,
- where this family is represented in the management team and substantially influences the key decisions and direction of the firm, and
- the business is perceived to be a family firm by the leading representative of the firm.

The dataset contains self-reported responses of individual study participants. Table 1 summarizes the variables in the dataset. All variables represent either family-, firm- or top management-level concepts or attributes that have been assessed by the owner and/or CEO of a particular German family firm (key informant approach).

Table 2 contains the descriptive statistics of the variables in the data set and reports the results of appropriate validity and reliability tests.
| Field(s) | Variable(s) | Variable type | Type of question | Value labels | 2nd order construct |
|----------|-------------|---------------|------------------|--------------|---------------------|
| INN1...INN3 | Reported position between two polar adjectives of three innovativeness items | Ordinal | 5-point semantic differential | – | Entrepreneurial orientation |
| PRO1...PRO3 | Reported position between two polar adjectives of three proactiveness items | Ordinal | 5-point semantic differential | – | Entrepreneurial orientation |
| RIS1...RIS3 | Reported position between two polar adjectives of three risk taking items | Ordinal | 5-point semantic differential | – | Entrepreneurial orientation |
| AUT1 ... AUT6 | Reported agreement with six autonomy items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Entrepreneurial orientation |
| COMP1...COMP2 | Reported position between two polar adjectives of two competitive aggressiveness items | Ordinal | 5-point semantic differential | – | Entrepreneurial orientation |
| FCC1...FCC10 | Reported agreement with ten family commitment culture items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | – |
| CONT1...CONT4 | Reported agreement with four continuity items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Long-term orientation |
| FUT1...FUT5 | Reported agreement with five futurity items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Long-term orientation |
| PER1...PER3 | Reported agreement with three perseverance items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Long-term orientation |
| OI1...OI3 | Reported agreement with three organizational identification items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Stewardship climate |
| COLL1...COLL3 | Reported agreement with three collectivist orientation items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Stewardship climate |
| LPD1...LPD3 | Reported agreement with three power distance items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Stewardship climate |
| IO1...IO3 | Reported agreement with three involvement orientation items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Stewardship climate |
| UPP1...UPP3 | Reported agreement with three use of personal power items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Stewardship climate |
| IM1...IM3 | Reported agreement with three intrinsic motivation items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Stewardship climate |
| CTL1 ... CTL3 | Reported agreement with three commitment to learning items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Learning orientation |
| SV1...SV4 | Reported agreement with four shared vision items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Learning orientation |
| OM1...OM3 | Reported agreement with three open-mindedness items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | Learning orientation |
| WTC1...WTC4 | Reported agreement with four willingness to change items | Ordinal | 5-point Likert scale | 1: not at all – 5: to an extreme extent | – |

(continued on next page)
| Field(s) |
| --- |
| **EMC1…EMC15**a |
| Variable(s) | Reported agreement with 15 error management culture items |
| Variable type | Ordinal |
| Type of question | 5-point Likert scale |
| Value labels | 1: not at all – 5: to an extreme extent |
| 2nd order construct | – |
| FB1 |
| Family ownership |
| Variable type | Nominal |
| Type of question | Single-choice question |
| Value labels | 1: yes; 2: no |
| 2nd order construct | – |
| FB2 |
| Perception of firm as being a family business |
| Variable type | Nominal |
| Type of question | Single-choice question |
| Value labels | 1: yes; 2: no |
| 2nd order construct | – |
| GI |
| Generations involved in the family firm |
| Variable type | Nominal |
| Type of question | Single-choice question |
| Value labels | 1: One generation, 2: two generations, 3: multiple generations (more than two) |
| 2nd order construct | – |
| IF |
| Involvement of the founder |
| Variable type | Nominal |
| Type of question | Single-choice question |
| Value labels | 1: yes; 2: no |
| 2nd order construct | – |
| Control_role |
| Role of respondent in the firm |
| Variable type | Nominal |
| Type of question | Single-choice question |
| Value labels | 1: owner, 2: owner and CEO, 3: CEO |
| 2nd order construct | – |
| Control_industry |
| Industry of the firm |
| Variable type | Nominal |
| Type of question | Single-choice question |
| Value labels | 1: Automotive, 2: Real Estate, 3: Bio/Medical Technology, 4: Electronics Industry, 5: Chemicals/Pharmaceuticals, 6: Energy/Resources, 7: Financial Services, 8: Trade, 9: IT/Software/Internet, 10: Engineering, 11: Media, 12: Professional Services, 13: Telecommunications, 14: Transport/Logistics, 15: FMCG/food, 16: Processing, 17: Tourism, 18: Health Care, 19: Textile Industry, 20: Other Services, 21: Craft |
| 2nd order construct | – |
| Control_CEO tenure |
| Tenure of current CEO |
| Variable type | Ratio |
| Type of question | Open question |
| Value labels | Years |
| 2nd order construct | – |
| Control_age |
| Age of the firm |
| Variable type | Ratio |
| Type of question | Open question |
| Value labels | Year of founding |
| 2nd order construct | – |
| Control_size |
| Total number of employees relative to competitors |
| Variable type | Ordinal |
| Type of question | Classification question |
| Value labels | 1: bottom 20%, 2: next lowest 20%, 3: middle 20%, 4: next highest 20%, 5: top 20% |
| 2nd order construct | – |
| Control_prior performance 1 |
| Total sales growth over the most recent year compared to industry competitors |
| Variable type | Ordinal |
| Type of question | Classification question |
| Value labels | 1: bottom 20%, 2: next lowest 20%, 3: middle 20%, 4: next highest 20%, 5: top 20% |
| 2nd order construct | – |
| Control_prior performance 2 |
| After-tax return on sales over the most recent year compared to industry competitors |
| Variable type | Ordinal |
| Type of question | Classification question |
| Value labels | 1: bottom 20%, 2: next lowest 20%, 3: middle 20%, 4: next highest 20%, 5: top 20% |
| 2nd order construct | – |

*a For the inventory of each of the available items, refer to supplementary material.
|                          | Mean | SD  | Cr. α | AVE  | CR | Item-to-total correlation | Factor loading (EFA) | Factor loading (CFA) |
|--------------------------|------|-----|-------|------|----|---------------------------|----------------------|----------------------|
| Innovativeness           |      |     |       |      |    |                           |                      |                      |
| INN1                     | 2.67 | 1.32| .56   | .78  | .82|                          |                      |                      |
| INN2                     | 3.23 | 1.29| .70   | .88  | .85|                          |                      |                      |
| INN3                     | 2.92 | 1.29| .71   | .88  | .82|                          |                      |                      |
| Proactiveness            |      |     |       |      |    |                           |                      |                      |
| PRO1                     | 3.64 | 1.00| .63   | .84  | .70|                          |                      |                      |
| PRO2                     | 3.41 | 1.08| .68   | .87  | .82|                          |                      |                      |
| PRO3                     | 3.69 | 1.02| .62   | .83  | .74|                          |                      |                      |
| Risk taking              |      |     |       |      |    |                           |                      |                      |
| RISK1                    | 2.87 | .96 | .60   | .82  | .68|                          |                      |                      |
| RISK2                    | 3.08 | 1.01| .62   | .83  | .77|                          |                      |                      |
| RISK3                    | 2.88 | 1.04| .66   | .86  | .78|                          |                      |                      |
| Competitive aggressiveness|      |     |       |      |    |                           |                      |                      |
| COMP1                    | 2.90 | 1.03| .47   | .86  | .50|                          |                      |                      |
| COMP2                    | 2.74 | 1.07| .47   | .86  | .95|                          |                      |                      |
| Autonomy                 |      |     |       |      |    |                           |                      |                      |
| AUT1                     | 4.14 | .77 | .62   | .76  | .68|                          |                      |                      |
| AUT2                     | 4.08 | .79 | .63   | .77  | .71|                          |                      |                      |
| AUT3                     | 3.69 | .92 | .62   | .76  | .71|                          |                      |                      |
| AUT4                     | 4.36 | .71 | .54   | .69  | .60|                          |                      |                      |
| AUT5                     | 4.13 | .82 | .67   | .80  | .76|                          |                      |                      |
| AUT6                     | 4.50 | .70 | .39   | .53  | .46|                          |                      |                      |
| Continuity               |      |     |       |      |    |                           |                      |                      |
| CONT1                    | 4.43 | .71 | .30   | .53  | .47|                          |                      |                      |
| CONT2                    | 3.65 | 1.09| .46   | .71  | .53|                          |                      |                      |
| CONT3                    | 4.29 | .75 | .65   | .86  | .81|                          |                      |                      |
| CONT4                    | 4.60 | .62 | .33   | .78  | .70|                          |                      |                      |
| Futurity                 |      |     |       |      |    |                           |                      |                      |
| FUT1                     | 3.58 | .98 | .44   | .63  | .48|                          |                      |                      |
| FUT2                     | 4.24 | .81 | .58   | .75  | .57|                          |                      |                      |
| FUT3                     | 4.10 | .86 | .51   | .72  | .61|                          |                      |                      |
| FUT4                     | 4.06 | .83 | .51   | .71  | .68|                          |                      |                      |
| FUT5                     | 4.18 | .78 | .61   | .79  | .77|                          |                      |                      |
| Perseverance             |      |     |       |      |    |                           |                      |                      |
| PER1                     | 4.25 | .69 | .64   | .83  | .72|                          |                      |                      |
| PER2                     | 3.99 | .82 | .73   | .89  | .84|                          |                      |                      |
| PER3                     | 4.32 | .74 | .70   | .87  | .80|                          |                      |                      |
| Organizational identification |   |     |       |      |    |                           |                      |                      |
| OI1                      | 4.54 | .65 | .52   | .78  | .70|                          |                      |                      |
| OI2                      | 4.40 | .72 | .55   | .81  | .62|                          |                      |                      |
| OI3                      | 3.97 | .66 | .33   | .79  | .69|                          |                      |                      |
| Collectivism             |      |     |       |      |    |                           |                      |                      |
| COLL1                    | 4.26 | .65 | .52   | .74  | .58|                          |                      |                      |
| COLL2                    | 4.09 | .81 | .76   | .91  | .87|                          |                      |                      |
| COLL3                    | 4.19 | .79 | .75   | .90  | .88|                          |                      |                      |
| Involvement orientation  |      |     |       |      |    |                           |                      |                      |
| IO1                      | 4.19 | .71 | .51   | .77  | .58|                          |                      |                      |
| IO2                      | 3.89 | .82 | .61   | .84  | .67|                          |                      |                      |
| IO3                      | 4.13 | .73 | .57   | .82  | .81|                          |                      |                      |
| Low power distance       |      |     |       |      |    |                           |                      |                      |
| LPD1                     | 3.89 | .92 | .51   | .80  | .69|                          |                      |                      |
| LPD2                     | 4.23 | .79 | .52   | .80  | .67|                          |                      |                      |
| LPD3                     | 4.14 | .85 | .48   | .76  | .60|                          |                      |                      |
| Use of personal power    |      |     |       |      |    |                           |                      |                      |
| UPP1                     | 3.87 | .54 | .32   | .85  | .76|                          |                      |                      |
| UPP2                     | 4.04 | .70 | .44   | .88  | .70|                          |                      |                      |
| UPP3                     | 3.51 | .91 | .10   | .27  | .08|                          |                      |                      |
| Intrinsic motivation     |      |     |       |      |    |                           |                      |                      |
| IM1                      | 3.54 | .80 | .79   | .91  | .85|                          |                      |                      |
| IM2                      | 3.72 | .74 | .84   | .93  | .91|                          |                      |                      |

(continued on next page)
2. Experimental design, materials, and methods

2.1. Experimental design

Whenever possible, the measures contained in the provided dataset were borrowed from prior research. When measures and items for a construct were not available, the items were conceptually derived from profound theoretical conceptualizations. To minimize bias in the responses, the
questionnaire included different question formats and scale anchors. Further, it contained reverse coded items to minimize acquiescence bias.

Entrepreneurial orientation (EO) was measured as a reflection of five dimensions, namely innovativeness, proactiveness, risk taking, autonomy, and competitive aggressiveness. All items reflecting the individual dimensions were adopted from Covin and Slevin [3], Lumpkin and Dess [4], and Knight [5]. Items for innovativeness, proactiveness, risk taking, and competitive aggressiveness were measured using 5-point semantic differential type scale. For autonomy items, researchers employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

Family commitment culture (FCC) was measured by adopting the family culture dimension of the F-PEC Scale of family influence [6,7] which is based on the family business commitment questionnaire [8,9], thereby however removing two items of the original scale because of their focus on the individual rather than the family level of analysis. Researchers employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

The operationalization of long-term orientation (LTO) was inspired by the conceptualization of Brigham et al. [10]. Researchers measured LTO as a second-order construct reflected by three dimensions: futurity, continuity, and perseverance. For all items reflecting those dimensions, a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent” was employed. While the items for continuity and perseverance are entirely new conceptualizations, four of the five futurity items were adopted from Hoffmann et al. [11] based on the work of Covin and Slevin [3].

The stewardship climate (SCL) concept is based on the conceptualization of Neubaum et al. [12] and was measured as a second-order construct reflected by six dimensions: organizational identification, collectivist orientation, low power distance, involvement orientation, use of personal power, and intrinsic motivation. Again, for all items reflecting those dimensions, a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent” was employed.

For the concept of learning orientation (LO), researchers relied on Sinkula et al. [13] and employed three dimensions: Commitment to learning, shared vision, and open mindedness. Again, for all items reflecting those dimensions, a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent” was utilized.

Finally, to consider an organizational culture orientation toward change and tolerance for failure, the data includes measures on willingness to change [14] and error management culture [15]. Again, for all items reflecting those dimensions, researchers employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

2.2. Materials

Survey data was collected via an anonymous self-administered web-based questionnaire addressing the owners and/or CEOs of German family firms. Data is available either as comma-separated values (CSV) (.csv) or in the statistical data format provided by the Statistical Package for the Social Sciences (SPSS) (.sav). Furthermore, a Word file contains the full phrasing of the survey items. All files can be accessed via Mendeley Data.

2.3. Methods

Relying on the family firm definition provided above, researchers used the Orbis database maintained by Burau van Dijk to identify German family firms. To arrive at the final target population, the following inclusion criteria apply:

- Only firms headquartered in Germany were selected.
- Only mature firms, that is, firms that were founded before 1994 and are at least 25 years old, have at least 25 employees, and a revenue of at least €5 million were considered for data collection.
- Only those firms in which shareholders are one or more private persons or a family known by name, and in which a shareholder is also a manager, were selected.
The remaining 3,997 firms were cross-referenced with various published directories and individual company websites to ensure the accuracy of the data and identify email addresses. Due to incorrect addresses, firm failures, or firm policies against completing mail surveys, researchers were forced to delete 442 firms from the list which resulted in a final target sample of 3,555 firms. Data collection took place between December 2017 and February 2018 and relied on the key informant approach at the top management level of analysis. An invitation and a link to a web-based survey were sent by email to the owners and/or CEOs of the firms identified. To mitigate ethical concerns in survey research, we aimed at protecting research participants by providing full transparency on the purpose and motivation of the research and ensuring the anonymity of research participants during and after completing the survey (i.e., at no time can conclusions be drawn about the participants or individual statements). After several reminders, the study yielded 404 responses for an initial response rate of 11.4%. However, of those, researchers eliminated responses with missing data. Furthermore, as the questions are related to the perceived strategic focus and culture of the firm, only questionnaires completed by a person in an ownership or top management position were included in the study sample. Moreover, the respondents were asked to classify themselves as being a family business, thereby using two questions: (1) “Are ownership and management control of the company dominated by one family?” and (2) “Do you consider your business to be a family business?”. This procedure yielded a final sample of 208 useful responses for an effective response rate of 5.9%.

Transparency document

Transparency document associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2019.103827.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.dib.2019.103827.

References

[1] A. Kuckertz, A. Prochotta, What’s Hot in Entrepreneurship Research 2018? Hohenheim Entrepreneurship Research Brief, 2018. February.
[2] C. Arz, Mechanisms of organizational culture for fostering corporate entrepreneurship: a systematic review and research agenda, J. Enterprising Cult. 25 (2017) 361–409.
[3] J.G. Covin, D.P. Slevin, Strategic management of small firms in hostile and benign environments, Strat. Manag. J. 10 (1989) 75–87.
[4] G.T. Lumpkin, G.G. Dess, Clarifying the entrepreneurial orientation construct and linking it to performance, Acad. Manag. Rev. 21 (1996) 135–172.
[5] G.A. Knight, Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation, J. Bus. Ventur. 12 (1997) 213–225.
[6] J. Astrachan, S. Klein, K. Smyrnios, The F-PEC scale of family influence: a proposal for solving the family business definition problem, Fam. Bus. Rev. 15 (2002) 45–58.
[7] S.B. Klein, J.H. Astrachan, K.X. Smyrnios, The F-PEC scale of family influence: construction, validation, and further implications for theory, Entrep. Theory Pract. 29 (2005) 321–339.
[8] R.T. Mowday, R.M. Steers, L.W. Porter, The measurement of organizational commitment, J. Vocat. Behav. 14 (1979) 224–247.
[9] R.S. Carlock, J.L. Ward, Strategic Planning for the Family Business: Parallel Planning to Unify the Family and Business, Palgrave, Houndsmill, NY, 2001.
[10] K.H. Brigham, G.T. Lumpkin, G.T. Payne, M.A. Zachary, Researching long-term orientation: a validation study and recommendations for future research, Fam. Bus. Rev. 27 (2014) 72–88.
[11] C. Hoffmann, T. Wulf, S. Stubner, Understanding the performance consequences of family involvement in the top management team: the role of long-term orientation, Int. Small Bus. J. 34 (2016) 345–368.
[12] D.O. Neubaum, C.H. Thomas, C. Dibrell, J.B. Craig, Stewardship climate scale: an assessment of reliability and validity, Fam. Bus. Rev. 30 (2017) 37–60.
[13] J.M. Sinkula, W.E. Baker, T. Noordewier, A framework for market-based organizational learning: linking values, knowledge and behavior, J. Acad. Mark. Sci. 25 (1997) 305–318.
[14] F.W. Kellermanns, K.A. Eddleston, Corporate entrepreneurship in family firms: a family perspective, Entrep. Theory Pract. 30 (2006) 809–830.
[15] C. Van Dyk, M. Frese, M. Baer, S. Sonmentag, Organizational error management culture and its impact on performance: a two-study replication, J. Appl. Psychol. 90 (2005) 1228–1240.