

# Rules of Thumb Revisited. Influencing Factors on the HR-Staff Ratio

*Guido Strunk*

Research Institute of Health Care Management and Health Care Economics  
WU

Vienna University of Economics and Business  
Althanstr. 51, A-1090 Wien, Austria  
Tel. +43-1-31336-4553 or 4010  
Fax +43-1-31336-724  
e-mail [guido.strunk@wu-wien.ac.at](mailto:guido.strunk@wu-wien.ac.at)

*Christiane Erten-Buch*

Interdisciplinary Department of Management and Organisational Behaviour  
WU

Vienna University of Economics and Business  
Augasse 2-6, A-1090 Wien, Austria  
Tel. +43-1-31336-4553 or 4009  
Fax +43-1-31336-724  
e-mail [christiane.erten-buch@wu-wien.ac.at](mailto:christiane.erten-buch@wu-wien.ac.at)

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# Rules of Thumb Revisited. Influencing Factors on the HR-Staff Ratio

*Guido Strunk & Christiane Erten*

## 1 Introduction

The importance of HRM „as an institutionalized way of handling the central issues of selecting, appraising, rewarding, and developing people“ has grown significantly over the past decade (Brewster & Hegewisch 1994, Brewster et al. 1997). Nevertheless, general discussions about cost cutting, downsizing, lean management, the reduction of personnel, etc. also lead to the question whether HR departments are overstaffed or not. Rules of thumb from the USA recommend for the size of HR departments values around 1% of the overall headcount, so that to every one member in the personnel department there are one hundred employees. Empirical evidence from the Cranfield Network on Human Resource Management (CRANET-G) since 1993 show however, that existing personnel departments are on average larger than predicted by this rule (approx. 1.3% of the overall headcount in 1993, 1.5% in 1999 and 1.4% in 2003/04; standard deviation is about  $\pm 1\%$ ).

Interestingly we can observe substantial differences among the examined organisations. The data from 1999 (but also from the other survey rounds) point out that on one hand 5% of the organisations have rather large personnel departments with more than 4% of the employees. On the other hand 5% of the organisations have ten times smaller HR departments with less than 0.4% of the overall number of employees in HR functions. In view of such big differences among the examined organisations and of values far away from the cited rule of thumb we have to question either if the rule is misleading or if there are good reasons for organisations not to follow such rules. According to Ommeren and Brewster (2000) normative rules for the size of HR departments are often too simple, misleading or simply misunderstood. The authors point out that there are a lot of internal and external factors influencing the requirements for different sized HR departments.

Brewster et al. (2006) as well as Strunk und Erten (2001a, 2001b, 2007) have analysed data from CRANET-G and on that basis developed a theoretically plausible model for the size of HR departments. Furthermore Strunk und Erten (2001a, 2001b, 2007) show, that the model is more or less stable over three major survey rounds: 1993, 1999 and 2003/04. The model is based on six explaining factors and leads to an overall explanation of variance between 15% (for 2003/04) and 21% (for 1999). But this also means that a great amount of variance can not be explained by the model. A reason for this can be seen in the heterogenic datasets coming from different countries with different legal systems and different cultural backgrounds. It is therefore the main goal of our present paper to enrich the model for explaining the size of HR departments with culture specific information.

The approach is very explorative, targeting on cultural factors in order to find out whether they have any impact on the size of HR departments. Data on cultural dimensions taken from the studies of Gerd Hofstede (1980), Fons Trompenaars (1994) as well as the GLOBE-project („Culture and Leadership Across the World“, Chhokar et al. 2007) will be used.

## 2 Determinants of the Size of HR Departments

According to the above mentioned rule of thumb, companies with approximately 100 employees are recommended to have one employee in the human resources department, whereas companies with 10,000 employees should have 100 in their personnel department. Furthermore the rule suggests a constant HR-staff ratio, independent from the size of the company. But this cannot be empirically proven. On the contrary, it has been shown in numerous studies (e.g. Schuler & Huber 1993) that the bigger the company the lower the HR-staff ratio. This is quite plausible if we consider that in large enterprises a more efficient use of the human re-

sources department prevails. Moreover it pays to have costly HR programmes, e.g. training courses, etc. if many employees can be reached at the same time. These are reasons why personnel departments in large corporations can be more efficient than in smaller ones.

Apart from the fact that larger organisations can work more efficiently in the HR field, there are other, specific determinants influencing directly the activities of the HR departments. We think that the size of a personnel department is determined by two independent factors:

1. **Complexity of HR activities:** The number of responsibilities of the HR department as well as their complexity.
2. **Efficiency:** The effectiveness and efficiency in handling their activities.

The size of an HR department is something like a sum of these conflicting factors. While the complexity of HR activities demands more staff in the HR department, helps the second factor to keep the staffing limited. As already outlined the second factor may be influenced by the size of the organisation. The two factors may be influenced by a lot of variables. The possible list of aspects leading to more complexity in HR activity may be infinite in nature. Based on theoretical assumptions we have tried to discuss these variables on the basis of three different spheres of influence (Strunk & Erten-Buch 2001a, 2001b):

1. **Field of activity:** Summarizes characteristics like the sector of the economy, the export orientation, the degree of internationalisation as well as the position of an enterprise in a group of companies/division.
2. **Organisational details:** Information on the structure of the workforce like e.g. staff turnover and age structure, percentage of management and percentage of employees under 25 years from the overall headcount as well as the overall number of employees.
3. **Outsourcing of HR activities:** Summarizes the outsourcing of HR activities to external providers or the assignment of responsibilities to line managers.

The named variables may be seen as examples for their sphere of influence. It is of course not a complete list of all possible factors of influence. For a lot of the named variables an influence on the HR headcount can be found based on bivariate correlations (Strunk & Erten-Buch 2001a, 2001b). But in order to get the best fitting model for the explanation of differences in the HR staff ratio multiple regression models are necessary taking more than one influencing factor into account. Model testing shows that many variables are predicting the same piece of variance, are intercorrelated and therefore redundant. A good explanation model could be found by stepwise multiple regression for the 1999 data set (Strunk & Erten-Buch 2001a, 2001b) and had been tested to be a stable model also for the 2003/04 data set (Strunk et al. 2007). One main result of our analysis was the finding, that no variable for “Outsourcing of HR activities” reaches the significance level in the multiple regression model. In contrast to our hypothesis none of the variables that could have eased the workload of the HR department shows a relationship with the size of the HR department. Interestingly enough, these findings are not only true for the whole model, but also for simple bivariate relationships. In total, the final model is based on six explaining factors and leads to an overall explanation of variance between 15% (for 2003/04) and 21% (for 1999).

- 1.1 Field of activity – Sector of the economy:** Depending on the industry a company is part of, we can see a very different structure of the workforce. The service sector, is characterized by a high percentage of highly qualified employees. As the direct contact between employees and customers is crucial for the success of service sector companies, it is very important to have satisfied employees willing to help customers. Apart from high wages, substantial HR services offering special benefits may be necessary. This needs comparatively high HR staff ratios. On the other hand there is e.g. the manufacturing sector competing more on costs than by the skills of its employees. HR departments may be primarily oriented towards administration and the implementation of predetermined systems of control (Brewster et al. 2006).

- 1.2 Field of activity – Part of a larger group:** Companies being part of a larger group of companies with many subsidiaries will be influenced by the position that the company in question holds within such a group. Corporate headquarters of national or international groups normally have a bigger variety of tasks than subsidiaries or single site companies. So we found that national companies belonging to larger corporations show a bigger HR-staff ratio than do single site organisations.
- 2.1 Organisational details – Percentage of management:** Companies with a high percentage of management from the overall headcount will require a lot of HR activities. Recruitment, training and development or calculations of compensation models for highly qualified staff is more time consuming and expensive than for low skill employees.
- 2.2 Organisational details – Percentage of older employees:** The arguments given above (2.1) for the percentage of management will also be true for older people of the workforce. Here we are also faced with special training and development needs.
- 2.3 Organisational details – Percentage of employees receiving internal training:** One of the most important tasks of HR departments is the organisation and implementation of measures in the field of training and development. The bigger the proportion of employees involved in such measures, the bigger the HR department.
- 2.4 Organisational details – Overall headcount:** The overall headcount is another important determinant of the HR staff ratio (e.g. Cullen et al. 1986). We found that large organisations generally enjoy economies of scale (Ommeren & Brewster 2000). For example wage administration, recruitment and training can be organised more efficiently if more employees are involved. Furthermore larger firms should require proportionately fewer staff to be directly engaged in monitoring and control (Brewster et al. 2006).

Although we assume to have considered important determinants on the size of the HR department within our model, we also want to stress that the above mentioned factors do not present a complete list of all possible factors of influence on the HR-staff ratio (cf. Ommeren & Brewster 2000).

### 3 Country specific influences on HRM

In different countries basic activities are considered to be of different importance and are carried out differently. Therefore the practice of HRM is – more than other business functions – closely linked to national culture (Gaugler 1988) and developments in cross-national HRM show a strong influence of national factors on HRM practices, like e.g. the HR staff ratio. The country factor, in Europe at least, is usually the most significant explanatory variable of HR practices (Brewster et al. 2004).

The increased level of globalisation and hence of competition amongst companies, has also resulted in an increased need of knowledge in the field of HRM issues (Dowling et al. 1994, Brewster et al. 1996, etc.). Modern people managers often have the responsibility for developing staff for subsidiaries in several countries. Therefore it would be valuable to understand HRM of different national and regional settings and to develop predictors in order to best choose and work on HRM practices. This has resulted in an increased number of academic studies comparing HRM from a cross-national view point (e.g. Aguilera & Jackson 2003). HRM research has also demonstrated the impact of the dynamic business environment, partly unique to each nation (e.g. competitive pressures on certain HRM instruments or policies), partly applying to most of the countries (e.g. growth of business alliances, downsizing of organisations and their workforce, impacts of new information technologies, quality and social costs of employment, etc) (e.g. Gooderham et al. 1999).

Based on these assumptions we believe that there is a set of country specific variables influencing the size of the HR department. Concrete theoretical models on these issues are very rare and therefore our research is mostly explorativ.

For the study of management it is important to examine the relationship between culture and organisations. Research within cross-cultural management therefore attempts to identify how culture influences organisations as well as managerial functions and actions. Culture seems to have an impact on the micro-variables, such as people's behaviour, and also on the macro-level for example on technology or organizational structure. But the abstract and complex nature of culture makes it difficult to identify and analyse this phenomenon.

In order to assess cultural similarities and differences, a framework for further study is necessary. A variety of helpful models have been proposed that examine groupings of cultural values. (e.g. Hofstede 1980, Trompenaars 1994, Chhokar et al. 2007). Each approach provides somewhat different insights; thus each can be useful on its own or in combination with other models. In essence, however, it has to be stressed that cultural models can only provide a simplified way to examine cultures. All cultures are far more complex than these models suggest, and it is important that this complexity is taken into account.

- **Culture's consequences:** Hofstede, the very well known, positivist, empirical researcher in the field of cross-cultural studies, stresses the mental conditions that cultural experiences impose. For him culture is „the collective programming of the mind which distinguishes the members of one human group from another. Culture, in this sense, includes systems of values; and values are among the building blocks of culture. Culture determines the identity of a human group in the same way as personality determines the identity of an individual“ (Hofstede 1980). Referring to an extensive review of literature Hofstede states that there are certain basic human problems arising similarly within all societies but the ways of dealing with them are different. The stated basic problems are (1) the relation to authority, (2) the conception of self, including the individual's concept of masculinity and femininity as well as the relationship between individuals and groups, and (3) primary dilemmas or conflicts (Hofstede 1980). The fact that Hofstede's empirically found cultural dimensions are similar to these basic human problems seems to support his findings. Based on Hofstede's work we are using data on (1) Individualism versus Collectivism, (2) Power Distance, (3) Uncertainty Avoidance, and (4) Masculinity versus Femininity. Values on these four variables are available for different countries (Hofstede 1980). Hofstede's work has been extensively reviewed, discussed and criticized from different points of view. Definitely his model has its weaknesses, but nevertheless, it can be judged to be useful heuristically as a starting point for the further investigation of cultural influences on management, and particularly for more qualitative research and analysis (Adler 1991).
- **Riding the waves of culture:** Fons Trompenaars (1994), a Dutch management consultant, presents a seven-dimensional model of national culture which he argues is particularly relevant to the conduct of international business. He relates differences in national culture to differences in ways of organizing. His database covers about 15,000 respondents. Some were participants in the author's cross-cultural training programs; others were employees in 30 companies in 50 different countries. Of the respondents 75% belong to management, the rest are part of general administrative staff, mainly female. Trompenaars' first five factors describe relationships with other people and have its origin in the "General Theory of Action" by functionalist sociologist Talcott Parsons (1951). They are: (1) universalism versus particularism, (2) individualism versus collectivism, (3) neutral versus emotional, (4) specific versus diffuse, and (5) achievement versus ascription. The remaining two dimensions are taken from anthropologists Kluckhohn and Strodtbeck (1961): (6) orientation in time, and (7) attitudes towards the environment. The purpose of research was to replace preconceived notions with empirical findings. We are using data on 15 different key questions for which Trompenaars (1994) gives tabulated country specific values.
- **Culture and leadership across the world:** The GLOBE study focuses on both, culture and differences in leadership across 25 societies (Chhokar et al. 2007). It was conceived

by Robert J. House (Wharton School of the University of Pennsylvania) in 1991 and at first he aimed at an international research project on leadership. Later on the study branched out into other aspects of national and organizational cultures. In the period of 1994-1997 some 170 voluntary collaborators collected data from about 17,000 managers in 951 local (non-multinational) companies belonging to three industries (food processing, financial services, and telecommunication services) in 62 countries throughout the world. The development and analysis of the GLOBE questionnaire was theory driven as compared to the more action-driven design of Hofstede's survey questionnaires. Furthermore GLOBE used two contexts to ask its culture questions: in the society and in the organization and GLOBE consciously attempted to avoid ethnocentric bias.

We are using data for nine scales on culture:

- (1) Institutional collectivism: extent to which companies or societies enforce collective action and collective distribution of resources.
- (2) Uncertainty avoidance: society's reliance on societal norms and procedures to alleviate unpredictability of future events.
- (3) Gender egalitarianism: extent to which a society maximizes gender role differences.
- (4) Future orientation: extent to which a society encourages and rewards future-oriented behaviour such as planning, investing in the future and delaying gratification.
- (5) Human orientation: degree to which fairness, altruism, generosity and caring are encouraged and rewarded.
- (6) Performance Orientation: degree to which a society encourages and rewards group members for performance improvement and excellence.
- (7) Power Distance: degree to which members of a society expect power to be unequally shared.
- (8) In-group collectivism: degree of encouragement to be a member of groups.
- (9) Assertiveness: extent to which people are encouraged to be tough, confrontational, assertive and competitive.

According to leadership we use the second level scales: (1) Charismatic, (2) team-oriented, (3) self-protective, (4) participative, (5) humane, and (6) autonomous.

## 4 Methodology

In order to integrate cultural factors into the final model, we apply statistical software for multi-level-analysis (MlwiN 2.02). This tool allows us to combine data from organisations of the 2003/04 CRANET-G survey (level 1) with country specific indicators (level 2) in order to investigate influencing factors from a multidimensional perspective. Starting with a model forcing in all first level variables, we build separate models for (1) Hofstede, (2) Trompenaars, (3) GLOBE on culture, (4) GLOBE on leadership. For the multilevel analyses only complete data sets can be used and no missing values are allowed at all. Complete data sets are available for the countries listed in Table 1.

## 5 Results

A preliminary test shows significant country effects ( $p = 0.02$ ) indicating that there are significant differences between the countries. Based on the named cultural models we have tried to explain these country effects.

- **Culture's consequences:** None of the four dimensions according to Hofstede show significant results. That means that these variables have no explanatory value.
- **Riding the waves of culture:** From an overall amount of 15 key questions, it is only one single question that shows significant results ( $p=0.02$ ): Percentage of respondents believing in individual decisions. That means that the dimensions of Trompenaars are also not helpful in explaining the country effects found in our model.

- **Globe culture:** Three of nine variables show highly significant results which leads to a situation where the country effects are not significant any more. These three variables are therefore able to explain the country effects. The following factors show significant influences: (2) Uncertainty Avoidance ( $p < 0.001$ ), (3) Gender Egalitarianism ( $p < 0.001$ ), (8) In-Group Collectivism ( $p < 0.001$ ). High values on the factors lead to a smaller HR-staff-ratio.
- **Globe leadership:** None of the scales used becomes significant and therefore they also have no explanatory value for the country effects found before.

## 6 Conclusion

We have been testing a theoretical model containing a number of important structural as well as organisational factors of influence on the HR staff ratio. These determinants have been chosen according to theoretical reasoning and empirical data. The empirical analysis used CRANET-G data from 1999 which contains 5,614 private owned organisations in 26 countries. The replication of the model with data from the survey round in 2003/04 led to very similar results. All of the Beta-weights show the same algebraic sign which can be interpreted as a confirmation of the overall structure of our model.

The final model is based on six explaining factors and leads to an overall explanation of variance between 15% (for 2003/04) and 21% (for 1999). But this also means that a great amount of variance can not be explained by the model. A reason for this can be seen in the heterogenic datasets coming from different countries with different legal systems and different cultural backgrounds. It is therefore the main goal of our present paper to enrich the model for explaining the size of HR departments with country specific data. Methodologically the present paper is based on a multilevel regression model, bringing in country specific data as a second level of explanation.

The results concerning cultural influences are not satisfying. Only selected cultural variables from the GLOBE-study show significant results. This may be explained by the fact that both studies (CRANET-G as well as GLOBE) have been conducted more or less at the same time. However, that leads to the question whether older studies in the field of comparative (cross cultural) management are still valid and should be used as a guideline for important decisions in management.

From a theoretical point of view it is clear that culture does not have a direct causal effect on HRM. This is very much like the well known discussion in organisation theory about the role the environment plays in the configuration of the organisation (see, e.g. Burns & Stalker 1961, Kieser & Kubicek 1992). Although contingency research empirically links environmental characteristics with specific organisational configurations, it is theoretically clear that it is not 'the environment' that 'directly influences' the organisational structure. Environmental characteristics are a frame within which certain configurations do have a higher chance to be realised, often because of efficiency advantages. In a similar way, we would suggest to describe the effect culture has on organisational practices in the area of HRM.

**Table 1: Countries**

	1st level	Hofstede	Trompenaars	GLOBE Culture	GLOBE Leadership
Austria	x	x	x	x	x
Belgium	x	x	not for all	no data	no data
Bulgaria	x	x	not for all	no data	no data
Denmark	x	x	x	no data	no data
Finland	x	x	x	x	x
France	x	x	not for all	x	x
Germany W	x	x	x	x	x
Greece	x	x	not for all	x	x
Hungary	x	x	not for all	x	x
Italy	x	x	not for all	x	x
Norway	x	x	not for all	no data	no data
Slovenia	x	no data	no data	x	x
Spain	x	x	x	x	x
Sweden	x	x	x	x	x
Switzerland	x	x	x	x	x
The Netherlands	x	x	x	x	x
Turkey	x	x	x	x	x
United Kingdom	x	x	x	x	x
Cases	1545	1461	1205-1461	1222	1222



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