Identifying the characteristics of a high-performance finance function

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Abstract

Purpose – The concept of the high-performance organization (HPO) receives much attention nowadays. To create and sustain an HPO, all parts of the organization must contribute, especially the finance function, whose relations with every part of the organization mean that it can be regarded as the spider in the organizational web. The paper aims to discuss this issue.

Design/methodology/approach – This study develops the high-performance finance function (HPFF) framework based on the HPO framework, a scientifically developed and validated approach to transforming organizations into HPOs. Based on an extensive literature review, potential characteristics of an HPFF were identified and subsequently linked to factors in the HPO frame work. Subsequently, using a questionnaire and statistical analysis, these potential characteristics were clustered into five HPFF factors that showed a significant positive relation with the finance function's performance.

Findings – The five HPFF factors are: Finance Function Improvement, IT Focus, People Development (of financial professionals working in the function), Role Clarity (for each of the various types of role in the function) and Strategic Role (of the finance function in the organization, especially in supporting management).

Originality/value – The HPFF framework is a practical improvement framework based on a solid scientific foundation. It also fills the current gap in the academic literature on how to develop HPFFs, thus giving the frameworks described in practitioner literature a robust scientific grounding.

Keywords Organizational performance, HPO, High performance, Finance function, HPFF

Paper type Research paper

1. Introduction

As the world emerges from the deepest recession since the 1980s, it is now – after years of shrinkage and cost reduction – time to look ahead by focusing with renewed energy on growth and adding value. One manifestation of this focus is increased attention to the concept of the high-performance organization (HPO). The HPO is defined as "an organization that achieves financial and non-financial results that are exceedingly better than those of its peer group over a period of five years or more, by focusing in a disciplined way on that what really matters to the organization" (de Waal, 2012, p. 5). Core to the HPO idea is to create such a strong internal organization that it can easily and flexibly deal with both threats posed and, especially, opportunities presented by the outside world. This can only be effectively achieved when all parts of the organization contribute to creating and sustaining the HPO (He *et al.*, 2018). This means that all departments, functions, business units and divisions must transform themselves into high-performance entities (Mowbray *et al.*, 2018). Among the most important support functions of every organization is the finance function (Burgess and Bryant, 2001; CFO Innovation Asia, 2018; Dunk, 1999; Graham *et al.*, 2012; Wolf *et al.*, 2015; Zoni and Merchant, 2007). The term

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"finance function" refers to all financial processes in an organization. The professionals responsible for financial processes usually work in the finance department and can also operate in other parts of the organization, for instance as business unit controllers (de Waal and Bilstra, 2016). The finance function can be regarded as the spider in the organizational web, as it has relations with every part of the organization and is also represented on the executive board. Therefore, it is of utmost importance that this function takes the lead by quickly transforming itself into a high-performance finance function (HPFF), serving as a role model for other functions in the organization.

The key question to address is how an HPFF can be created. In the literature, especially in practitioner contributions, a plethora of relevant publications can be found. However, most examine the finance function in isolation, focusing on its transformation to "world class finance" or "best in class finance" with little regard to the function's role in the greater scheme of organizational workings and transformations (O'Connor *et al.*, 2014; Wunsche, 2007). This study's goal is to develop an HPFF in a way that it explicitly contributes the organization in its endeavors to become an HPO. As the foundation for this endeavor, this study takes the HPO framework, which has been scientifically developed and validated for transforming organizations into HPOs (de Waal and Goedegebuure, 2017), and explicitly analyzes how the finance function can reshape itself in a manner that supports all factors of the HPO framework. As such, this HPFF framework is the first practical improvement framework to have a solid scientific foundation. It also fills the current gap in the academic literature on how to develop HPFFs, thus giving the frameworks proposed by practitioners finally a robust scientific grounding.

This paper is structured as follows. The next section describes the HPO framework, which is the starting point of the HPFF. This is followed by a review of the (mainly practitioner) literature on developments in the finance function, including ideas on how to improve and strengthen this function. Based on this review, 11 "movements" are identified that together describe the direction in which the finance function is moving. Subsequently, these movements are linked to the HPO factors and then tested in practice. The study results are then analyzed and their practical value discussed. The paper ends by drawing conclusions, discussing limitations of this research and outlining opportunities for future research.

2. The HPO framework

In developing the HPO framework, the objective was to holistically identify which factors influence the sustainable high performance of an organization and to incorporate these in a framework that could be easily used by organizations for self-evaluation and improvement. The research was conducted in two phases (de Waal, 2006/2010). The first phase involved collecting studies on high performance and excellence. To be included in the research, studies had to meet several criteria, the most prevailing being: a written account that justified the research method, research approach and selection of the research population; a well-described analysis; and retraceable results and conclusions allowing assessment of the quality of the research methods. In this way, many HPO publications that offered no evidence for their claims were filtered out.

Having identified 290 studies that fulfilled the criteria, the process of identifying HPO characteristics continued as follows. First, elements were extracted from each publication that the authors regarded as essential for high performance. Because different authors used different terminologies, similar elements were placed in groups of common factors, and each group – later to be termed "characteristic" – was given an appropriate description. In total, 189 characteristics were identified. The next step was to calculate the "weighted importance," i.e., the number of times a characteristic occurred in each individual category, for each characteristic. Finally, the 54 characteristics with the highest weighted importance were chosen as those that potentially formed an HPO. In Phase 2 of the research, these 54 potential HPO characteristics were incorporated into a questionnaire distributed during lectures and workshops to managers across the globe. Respondents were asked to indicate how well their organization performed on each of the HPO characteristics – on a scale from 1 (very poor) to 10 (excellent) – and how their company's results compared with those of its peers. This latter subjective measure of organizational performance is a scientifically accepted indicator of real performance (Bommer *et al.*, 1995; Dawes, 1999; Dess and Robinson, 1984; Wall *et al.*, 2004; Vij and Bedi, 2016). The questionnaire yielded 2,015 responses from approximately 1,470 profit, non-profit and government organizations. Through statistical analysis, 35 characteristics with a strong significant positive relation to organizational performance were extracted and categorized into five factors. Since 2007, these factors have been validated for many countries and for both profit and non-profit industries, based on data collected from approximately 55,000 respondents. It is important to note that, in essence, the factors remain unchanged regardless of the type of organization or industry and of the country where the organization is based.

The HPO factors are as follows (see Appendix 1 for the detailed characteristics; de Waal, 2012):

- HPO Factor 1: continuous improvement and renewal – an HPO has a unique strategy that makes the organization stand out in its sector. It is responsive to market developments by continuously innovating its products and services, thus creating new sources of competitive advantage. An HPO ensures that core competencies are retained in-house and non-core competencies are outsourced.
- HPO Factor 2: openness and action orientation – HPO managers value the opinions of employees and always involve them in important business and organizational processes. Making mistakes and taking risks are always encouraged in an HPO, as these are considered valuable opportunities to learn, to develop new ideas and to exchange knowledge in pursuit of collective improvement.
- HPO Factor 3: management quality – HPO managers focus on encouraging employees' belief and trust in them. They value loyalty and have high integrity; they treat their employees respectfully and maintain individual relationships with them. HPO managers are highly committed to the organization and have a strong set of ethics and standards. They are supportive and help employees to achieve results, for which they also hold them accountable. HPO managers are role models for the rest of the organization.
- HPO Factor 4: long-term orientation – for an HPO, long-term commitment is more important than short-term gain. The organization's stakeholders benefit from this long-term orientation and are assured that the organization is maintaining mutually beneficial long-term relationships with them. HPO managers are committed to the organization and new positions are filled from within the organization. An HPO is a secure and safe workplace where people feel free to contribute to the best of their ability.
- HPO Factor 5: employee quality – HPO employees are flexible and resilient, as they are trained (formally and on-the-job) and encouraged to achieve extraordinary results. As a team, they are diverse and, therefore, complementary, enabling them to deal with all types of issues and generate sufficient alternative ideas for improvement.

An organization can evaluate its HPO status by conducting an HPO diagnosis. This process starts with an HPO awareness workshop for management and other interested parties, during which they become acquainted with the HPO framework, HPO diagnosis and the possible HPO transformation process. During the actual HPO diagnosis, management and employees complete the HPO questionnaire comprising questions based on the 35 HPO characteristics. Individual scores are converted to average scores on the HPO factors for the overall organization. These average scores indicate which HPO factors and characteristics the company needs to improve to become an HPO.

3. Ideas for the HPFF

Several studies show the advantages of an HPFF. In a comparison of best-performing with average-performing finance functions, the Hackett Group (O'Connor *et al.*, 2014) found that, on average, the former achieve 10 percent more cost reduction, provide financial services for 46 percent lower cost, have 52 percent less full-time equivalents (FTEs) and only have to correct 1.4 percent of sent invoices (compared to 2.7 percent for average-performing functions). In a study of HPOs, Accenture (2014) noted that these organizations are more satisfied with their finance function than non-HPOs. These functions are headed by chief financial officers (CFOs) who exercise much influence in the organization, are often responsible for large, organization-wide transformation projects and are explicitly involved in strategic planning processes and evaluating investments in new technology. Using a questionnaire distributed among 1,500 finance professionals in over 200 organizations, PWC (2014a) identified the main differences between best-performing and average-performing finance functions. They found that average-performing functions have 60 percent higher costs and take twice as much time to collect and analyze data. In contrast, best-performing functions have installed twice as many automatic key controls, have approximately 40 percent more FTEs in a business partnering role and spend 47 percent of their time on analysis and knowledge-related activities.

The (mainly managerial) literature offers many ideas on how to create an HPFF. Sources were reviewed that draw on practical research to suggest ideas for improving the finance function in the next five to 10 years. These sources were mainly sought in the EBSCO and Emerald databases and through Google Search, using the search terms "high performance finance function" and the combination of "finance function" with "excellence," "improvement," "world class" and "best-in-class." In total, 20 sources were identified for extracting improvement ideas, which were organized in analogous categories (Hoe, 2009; Kelder *et al.*, 2010; PWC, 2012, 2014a, b; Chartered Global Management Accountant, 2013; CFO Research, 2013, 2014; Chang *et al.*, 2014; de Waal *et al.*, 2013; KPMG, 2013; Lawson, 2013; Tillema, 2013; Accenture, 2014; CFO Research and SAP, 2014; O'Connor *et al.*, 2014; Strikwerda, 2014; USG Finance and Tijdschrift Controlling, 2014; O'Connor *et al.*, 2015; Fintouch, 2015). Finally, the 11 highest-scoring categories were reshaped into "movements" to indicate the way in which the finance function must develop to attain high-performing status in the future. These movements are described as follows:

- Movement 1: shifting focus from going-concern to continuous improvement of the finance function. The finance function still devotes much time to handling current processes within the organization, often performing extensive "firefighting." In the future, the finance function will be devoted to continuously improving its efficiency and effectivity. Organizations are constantly in flux, with "change" being the normal status and influencing the financial processes. The finance function will anticipate these changes and ensure that its processes and services are suitably prepared.
- Movement 2: shifting focus from executing routine transactions to executing added value activities. This move requires freeing up financial professionals from their current routine work to become real business partners of operational managers.
- Movement 3: from manual operations to full automation. The finance function has been greatly automated in recent years, but many organizations still suffer from

legacy systems. These will be replaced by integrated IT systems, thus seamlessly integrating financial processes across units and functions.

- Movement 4: from being internally focused, mainly busy with maintaining order in financial processes, to more cooperation and, thus, more support of the business. For this purpose, support tools (e.g. business intelligence tools, smart reporting) must be introduced and improved, and the number of fixed reports must be decreased in volume and number, so that both the business function and the finance function have sufficient time to conduct meaningful dialogue. It will be assumed that line managers only need detailed information on matters that greatly influence achieving their specific objectives and targets.
- Movement 5: from looking to what happened in the past, rooted in the nature of the financial profession, to looking into the future with more proactivity and forecasting. The organization will, thereby, be earlier to identify risks and dangers requiring it to act, as well as opportunities of which it can take advantage as a first-mover. Through working with models and scenarios aligned with the strategy developed by business units, the need for financial interventions can be detected earlier.
- Movement 6: from doing everything in-house to shared services and outsourcing. This move has been ongoing for quite some time now but will accelerate as increasingly more activities qualify for being delivered through shared services or outsourced, freeing up further time for the finance function to execute value-adding activities.
- Movement 7: from financial knowledge and expertise being concentrated in the finance function, on which the business is entirely dependent regarding financial matters, to shifting (routine) financial processes to operations and more financial self-reliance in the business. This move is supported by experts from the finance function and by elaborate but user-friendly IT architecture.
- Movement 8: from professional and knowledge training, which financial professionals receive when required by financial issues or when taking the next step in their financial career, to continuous personal development. Because many routine tasks will be automated, only complex activities will still require higher levels of expertise. At the same time, working more often and more closely with the business requires different skills. These challenges can only be met when financial professionals continue to proactively develop themselves, rather than responding only when circumstances dictate. The finance function will, in collaboration with the human resource department, develop a talent management program to guarantee meeting future demands for financial experts.
- Movement 9: from a mainly tactical role to a more strategic role in the organization. The finance function will have a greater influence on strategic planning and decision-making processes to safeguard the financial component therein. Financial professionals can use their expertise to analyze in-depth the financial consequences of certain decisions and activities, and provide business managers with the right advice. Rather than offering mere reflections or remarks, this advice should pose inquisitive questions to initiate dialogue. By challenging the business to produce its own scenarios and solutions, the quality and effectivity of financial professionals' advice will increase. In particular, the financial function will lend support to the business in addressing complex and major problems, stepping back once these have been solved. Therefore, management of the finance function must pay attention to developing and strengthening the communication and dialogue skills of financial professionals.

- Movement 10: from "one size fits all" development programs for financial professionals, which are often strongly technically oriented, to specific behavioral profiles for each role that a financial professional performs within the finance function during a specific time period.
- Movement 11: from IT laymen to IT application experts. Increasing automation and more complex questions from the business require specialist knowledge in the finance function on the availability and functionality of IT applications. The IT department will handle the installation of hardware and software, but the finance function must know in detail what this new software can do, so as to optimally support the business.

To create and maintain an HPFF, it is not always necessary to incorporate all 11 movements in the finance function. The relevance of the 11 movements depends on the organization's specific situation. Nonetheless, it is recommended to regularly revisit the relevance of all 11 movements to the finance function as individual situations arise.

4. Relation between HPO factors and HPFF movements

Table I considers the movements of the HPFF alongside the HPO factors to evaluate whether all of the latter are "covered" by the former.

The relation between them is examined from the perspective of the HPO factors, as the finance function's role is to support these with its own HPFF movements:

- Continuous improvement and renewal: HPOs continuously improve and renew their processes, products and services. Because this makes change the norm, rather than the exception, the finance function must ensure that it cannot only handle this change but also take the lead in the process of continuous improvement and renewal, both of the organization overall and of the function itself. Specifically, the function must explore the possibilities offered by IT, shared services and outsourcing.
- Openness and action orientation: because the finance function will be increasingly in contact with the business – regarding transactional financial or complex, high-impact activities – it should ensure that financial professionals have the right communication and dialogue skills to talk to the business and to help managers when and where needed.

HPO factor	HPFF movement
Continuous improvement and renewal	1. Increase efficiency and effectivity of the finance function 3. More use of information technology to automate processes 6. More outsourcing and shared services
Openness and action orientation	4. More cooperation with the business 7. More financial self-reliance of operational managers
Management quality	8. Continuous attention for the development of financial professionals and for talent management 10. Different behavioral profiles for financial professionals
Long-term orientation	2. More focus on performing added value activities and business partnering 9. More involvement in strategic and decision processes 5. More focus on looking ahead
Employee quality	8. Continuous attention for the development of financial professionals and for talent management 11. More knowledge about information technology

Table I. The relation between the HPO factors and HPFF movements

- Management quality: managers of HPOs are responsible for creating the preconditions for their employees to achieve extraordinary results. In an HPFF, this can be achieved through continuous attention to developing financial professionals and managing talent, thus ensuring that the personnel have the requisite skills to create and maintain the HPFF. Managers should also ensure that there are different behavioral profiles for financial professionals, so that each can develop in the direction best suited to them.
- Long-term orientation: HPOs always prioritize long-term continuity and sustainability over short-term financial gain. The finance function exists to support the business in its survival and long-term growth; it does this by supporting management during strategic, planning, decision making and forecasting processes, providing the information needed to make decisions that promote the organization's long-term future.
- Employee quality: employees of HPOs want to have responsibility, be held accountable for their results and achieve extraordinary performance. For the finance function, it is important for employees to have these traits, so that financial activities are executed at the highest quality level. Though managers of the financial function need to guarantee that employees can develop in the right direction, finance professionals should take personal responsibility for their own development. This especially includes developing more sophisticated IT knowledge and skills.

The information in Table I gives the basis for defining the HPFF: the HPFF supports the organization to become and remain an HPO by ensuring that its people, processes and systems are of the highest quality.

5. Research approach

During the literature search, a questionnaire that directly translates the movements into operational activities could not be found. Therefore, in a series of brainstorm sessions conducted by the authors, a questionnaire was developed. Subsequently, several financial experts were asked to review and comment on the questionnaire after which it was finalized. Table II presents the resulting operationalization of the 11 movements in 34 questions, which are regarded as representing potential HPFF characteristics by covering all facets of each movement. In addition, the method of measuring the success of the financial function is also operationalized.

The potential HPFF characteristics were collated using an internet-based questionnaire, prepared in Dutch and English versions (the latter was reviewed and corrected by a native English-speaking editor). The questionnaire's face validity was tested by asking several CFOs and financial controllers to complete it and provide comments regarding wording and understandability (Synodinos, 2003; Saris and Gallhofer, 2007; Rowley, 2014). After updating and finalizing the questionnaire based on their feedback, financial professionals in the authors' professional circles – mostly CFOs and chief financial controllers – were approached in Dutch and Belgian organizations over a period of six months. Those who agreed to cooperate were sent an internet link to the questionnaire and requested to ask as many people as practicable in their finance function to complete it. In addition, when speaking at conferences, the authors asked delegates to complete the questionnaire. Such convenience sampling was employed as it is the quickest way to collect a sufficiently large data set in a short time period, in a situation where a representative (probability) sample cannot be constructed (Mallet, 2006; Bailey, 2012). To ensure that enough data were collected for statistical analysis, it was necessary to obtain five times the number of items in valid questionnaires (MacCallum *et al.*, 1999). Therefore, at least 195 valid questionnaires needed to be collected.

HPFF movement	Potential HPFF characteristics
1. Increase efficiency and effectivity of the finance function	1. Implementing improvements is actively encouraged
	2. Improvements are implemented in a structured way
	3. People have enough time to make their work activities more efficient and effective
	4. Improvement efforts are tracked and evaluated using performance indicators
	5. Data is defined in a uniform manner so that there are no differences in interpretation
2. More focus on performing added value activities and business partnering	6. Less and less time is spent on routine activities
	7. More and more added value activities for operations are performed
	8. Possibilities to create more added value activities for operations are, together with operations, regularly examined
3. More use of information technology to automate processes	9. Automation and digitalization have high priority
	10. All routine processes have been fully automated
	11. There is sufficient budget each year to accelerate automation and digitalization of the finance function
4. More cooperation with the business	12. The satisfaction of internal clients is structurally measured
	13. In all the important processes conducted in the organization there is involvement of the finance function
	14. Possibilities for cooperation and collaboration with operations is actively searched for by the finance function
5. More focus on looking ahead	15. What if scenarios are regularly produced
	16. Prognoses are proactively adapted on the basis of important developments
	17. Priority during important management decision-making is given to the latest prognoses, as developed by the finance function,
6. More outsourcing and shared services	18. Processes are executed as much as possible in a uniform way and in one place, so that expertise about these processes is bundled and centralized
	19. Whether insourcing or outsourcing is the best option for a certain process is constantly examined
7. More financial self-reliance of operational managers	20. Managers in the organization are sufficiently capable of interpreting and making decisions on the basis of the information offered by the finance function
	21. Managers in the organization engage in financial self-service ("self-service" means that the managers have the opportunity to access and compose their management reports themselves, without the intervention of the finance function)
	22. Managers in the organization mainly use the finance function for support with difficult and complex (financial) questions
8. Continuous attention for the development of financial professionals and for talent management	23. People receive sufficient technical training to be able to excel in their work activities
	24. People receive sufficient personal development training to be able to excel in their work activities
	25. All people in the finance function have a personal development plan
9. More involvement in strategic and decision processes	26. In each decision of strategic importance, the finance function has important input
	27. Other departments regularly spontaneously ask the finance function for advice when taking important decisions
	28. The finance function is seen as a serious partner during strategic discussions
10. Different behavioral profiles for financial professionals	29. There is a clear description of the technical requirements per financial role
	30. There is a clear description of the behavioral requirements per financial role
	31. There are specific development programs per financial role

(*continued*)

Table II. The HPFF movements and accompanying potential HPFF characteristics

HPFF movement	Potential HPFF characteristics
11. More knowledge about information technology	32. The finance function has much IT application knowledge (IT application knowledge means having knowledge of specific IT software: what it can do and how it can help the organization)
	33. The finance function is aware of the current and newest applications and possibilities of IT software
	34. The finance function is capable of implementing the latest IT software
Performance of the finance function	35. The internal client is very satisfied with the finance function
	36. Financials themselves are very satisfied with the finance function
	37. The finance function always has an important role to play in decision-making in the organization
	38. The finance function is very efficient ("efficiency" is the degree to which resources are used in the function in an expedient way)
	39. The finance function is very effective ("effective" is the degree to which the finance function is successful in realizing its objectives)

Table II.

In total, 396 fully completed questionnaires were collected, comprising 165 from Belgian and 231 from Dutch respondents across a total of 342 organizations. In terms of role, 10.6 percent of respondents were CFOs, 17.2 percent financial directors, 36.9 percent financial controllers, 10.3 percent specialists (accountant/consolidator, tax manager, risk manager, system analyst or treasurer) and 25 percent had other positions. Respondents were sectorally distributed as follows: 11.1 percent worked for the government, 38.4 percent in the profit sector and 50.5 percent in the non-profit sector. Regarding the size of respondents' organizations, 45.6 percent had more than 1,000 employees, 25.7 percent between 501 and 1,000 employees, 25.1 percent between 101 and 500 employees, and 3.6 percent 50 or fewer employees (there were no organizations between 51 and 1,000 present). Finally, regarding the size of the respondents' finance function, this had fewer than 10 people in 34.1 percent of the organizations, between 11 and 25 people in 29.8 percent, between 26 and 50 people in 12.4 percent, and more than 50 people in 23.7 percent.

6. Research results and analysis

The HPO framework has been shown to have high internal consistency and its five subscales have been validated repeatedly (e.g. de Waal *et al.*, 2016; Sultan *et al.*, 2017). On this basis, it was decided to average the relevant items into the original five subscales, instead of performing exploratory factor analysis (EFA). In keeping with previous findings, the internal consistency of the HPO subscales was high (continuous improvement, 8 items, Cronbach's $\alpha = 0.874$; openness and action orientation, 6 items, $\alpha = 0.819$; management quality, 12 items, $\alpha = 0.946$; employee quality, 4 items, $\alpha = 0.787$; long-term orientation, 5 items, $\alpha = 0.743$).

To analyze the newly developed HPFF questionnaire, EFA was performed. Components with eigenvalues higher than 1 were extracted through principal components analysis. A scree plot was used to visualize the suitability of using factors with eigenvalues higher than 1. Solutions were rotated using direct oblimin rotation, and factor scores were saved using Bartlett's method. Coefficients lower than 0.4 were suppressed to increase the ease of interpreting the factors (Hayton *et al.*, 2004; Sekaran and Bougie, 2010). Five items were removed based on this criterion. The factor scores were used in the subsequent structural equation modeling (SEM) analyses (see below). The EFA returned a solution containing six factors. Inspecting the results revealed that the sixth factor explained little variance (3.19 percent) and, more importantly, that the item loadings on this factor were hard to interpret. It was decided to run the EFA with five factors. This five-factor solution had a high

Kaiser–Meyer–Olkin (KMO) measure (0.937), indicating excellent sampling adequacy. The solution explained 61.40 percent of variance. The first factor was by far the most prominent, explaining 41.75 percent of variance (see Appendix 2). All factors had high internal consistency (see below). Two cross-loadings were deemed problematic. Consequently, the items "In our financial function, there is a clear description of the technical requirements for each financial role" and "In our financial function, there are specific development programs for each financial role" were, respectively, moved from factors 2 and 3 to factor 5. No problematic dependencies between factors were indicated by the factor correlation matrix (see Appendix 2). Inspecting the factor loadings in the pattern matrix led to the following verbal interpretation of the factors: Factor 1 – "Finance Function Improvement" (Cronbach's $\alpha = 0.820$); Factor 2 – "IT Focus" ($\alpha = 0.890$); Factor 3 – "Personal Development" ($\alpha = 0.838$); Factor 4 – "Role Clarity" ($\alpha = 0.842$); and Factor 5 – "Strategic Role" ($\alpha = 0.921$).

The underlying structure of the performance of the finance function items was analyzed in a similar manner. EFA was again used in the same manner described above. The factor scores were used in the subsequent SEM analyses. The KMO measure was 0.862, indicating excellent sampling adequacy. The EFA of the finance function items' performance returned a one-factor solution (only one factor with eigenvalue > 1). This factor explained 71.25 percent of variance and is named "Finance Function Performance." All five items load positively onto the factor and all loadings are higher than 0.4 (see Appendix 2).

6.1 HPFF factors and characteristics

Table III lists the HPFF factors, their accompanying characteristics and the movements from which they originate. The detailed loadings for the HPFF characteristics are given in Appendix 2.

HPFF Factor 1 is named "Finance Function Improvement" as it contains almost all the characteristics of movement "Increase efficiency and effectivity of the finance function" (characteristics 1, 2, 3, 4). Another characteristic aims at increasing knowledge in the finance function to ensure that improvements can easily be achieved (5), while the remaining characteristic describes activities that improve the "financial life" of the organization's managers (6). HPFF Factor 2 is denoted "IT Focus" as it contains all the characteristics of movements "More knowledge about information technology" (7, 9, 12) and "More use of information technology to automate processes" (8, 10, 11). This factor also contains a characteristic denoting the result of focus on IT (13). HPFF Factor 3 is named "People Development" as it contains all the characteristics of movement "Continuous attention for the development of financial professionals" (14, 15, 16). HPFF Factor 4 is denoted "Role Clarity" as it contains all the characteristics of movement "Different behavioral profiles for financial professionals" (17, 18, 19), and thus focuses on clarifying the different roles in the finance function. HPFF Factor 5 is named "Strategic Role" as it contains all the characteristics of movement "More involvement in strategic and decision processes" (20, 21, 22), and characteristics denoting close cooperation between finance and operations (23, 24). It also contains two characteristics concerning the importance placed by the finance function on increasing added value for operations (25, 26). Finally, it includes two characteristics describing forecasting, an important finance function activity on which management rely to be able to properly execute the strategic process (27, 28).

6.2 Performance of the finance function

The following list presents the finance function performance factor and its accompanying characteristics. Detailed loadings of the variables on this factor are given in Appendix 2:

(1) Performance characteristic:

- financials themselves are very satisfied with the financial function;

HPFF factors and characteristics	Movement
F1: Finance Function Improvement	
1. In the financial function, improvement efforts are tracked and evaluated using performance indicators	1. Increase efficiency and effectivity of the finance function
2. In the financial function, improvements are implemented in a structured way	1. Increase efficiency and effectivity of the finance function
3. In the past year, financials have had enough time to make their work activities more efficient and effective	1. Increase efficiency and effectivity of the finance function
4. In the financial function, implementing improvements is actively encouraged	1. Increase efficiency and effectivity of the finance function
5. In the financial function, processes are executed as much as possible in a uniform way and in one place, so that expertise about these processes is bundled and centralized	6. More outsourcing and shared services
6. In the organization, managers engage in financial self-service	7. More financial self-reliance of operational managers
F2: IT Focus	
7. The financial function is capable of implementing the latest IT software	11. More knowledge about information technology
8. In the financial function, all routine processes have been fully automated	3. More use of information technology to automate processes
9. The financial function has much IT application knowledge	11. More knowledge about information technology
10. The financial function has sufficient budget at its disposal each year to accelerate automation and digitalization of the function	3. More use of information technology to automate processes
11. In the financial function, automation and digitalization have a high priority	3. More use of information technology to automate processes
12. The financial function is aware of the current and newest applications and possibilities of IT software	11. More knowledge about information technology
13. The financial function spends less and less time on routine activities	2. More focus on performing added value activities and business partnering
F3: personal development	
14. In the past year, financials have followed sufficient technical training to be able to excel in their work activities	8. Continuous attention for the development of financial professionals and for talent management
15. In the past year, financials have followed sufficient personal development training to be able to excel in their work activities	8. Continuous attention for the development of financial professionals and for talent management
16. In the financial function, everyone has a personal development plan	8. Continuous attention for the development of financial professionals and for talent management
F4: Role Clarity	
17. In the financial function, there is a clear description of the behavioral requirements per financial role	10. Different behavioral profiles for financial professionals
18. In the financial function, there is a clear description of the technical requirements per financial role	10. Different behavioral profiles for financial professionals
19. In the financial function, there are specific development programs per financial role	10. Different behavioral profiles for financial professionals

(*continued*)

Table III.
The HPFF factors and characteristics and their originating movements

HPFF factors and characteristics	Movement
F5: Strategic Role	
20. The financial function is seen as a serious partner during strategic discussions	9. More involvement in strategic and decision processes
21. The financial function has important input in each decision of strategic importance	9. More involvement in strategic and decision processes
22. Other departments regularly spontaneously ask the financial function for advice when taking important decisions	9. More involvement in strategic and decision processes
23. The financial function is actively involved in all the important processes conducted in the organization	4. More cooperation with the business
24. The financial function actively searches for possibilities for cooperation and collaboration with operations	4. More cooperation with the business
25. The financial function performs more and more added value activities for operations	2. More focus on performing added value activities and business partnering
26. The financial function, together with operations, regularly examines possibilities to create more added value activities for operations	2. More focus on performing added value activities and business partnering
27. The financial function proactively adapts prognoses on the basis of important developments	5. More focus on looking ahead
28. The latest prognoses, as developed by the financial function, are given priority during important management decision making	5. More focus on looking ahead

Table III.

- the financial function is very effective;
- the financial function is very efficient;
- the internal client is very satisfied with the financial function; and
- the financial function always has an important role to play in decision-making in the organization.

6.3 HPFF framework

To investigate the influence of the HPO factors and HPFF factors on finance function performance, SEM was used. The model that was fitted connected each individual HPO and HPFF factor to finance function performance. Error variances and connections between error variances were also modeled. Maximum likelihood estimation was used to fit the model. All SEM analyses were performed using AMOS software (version 23). Model fit was good (CFI = 0.998, RMSEA = 0.054; CMIN/df = 0.873; RMR = 0.009; AGFI = 0.974), and several connection weights were statistically significant. Figure 1 graphically depicts the results (presented in full in Appendix 3, which also provides a schematic overview of bivariate correlations between the HPFF factors).

Figure 1 shows that the HPFF factor Strategic Role has the strongest correlation with finance function performance. It can be argued that the purpose of a staff function is to "serve" and support the business and its management as effectively as possible (Kraan, 2017; Zoni and Pippo, 2017). This is certainly the case for the finance function, as the HPFF factor Strategic Role, which aims to support operations has the most characteristics (nine) of all HPFF factors. Executing these characteristics properly will undoubtedly have a positive

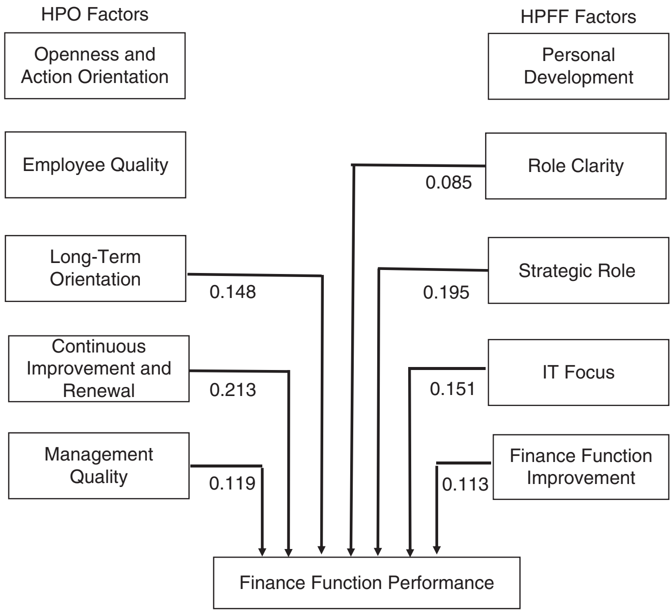


Figure 1.
The HPFF framework

effect on finance function performance, especially for the elements "The internal client is very satisfied with the financial function" and "The financial function always has an important role to play in decision-making in the organization." The increasing role of IT in all organizational processes is reflected in the HPFF factor IT Focus showing a positive correlation with finance function performance: basically, the better the IT infrastructure and IT knowledge in the finance function, the better it can operate and cooperate. The HPFF factor Finance Function Improvement also shows a positive correlation with Financial Function. This is unsurprising since all of these factor's characteristics have a direct impact on improving the function's day-to-day activities. The remaining two HPFF factors have a weaker or no direct influence on finance function performance. The HPFF factor People Development has a strong relation with the HPFF factors Finance Function Improvement and IT Focus, which shows that finance function members must be developed in the right manner, in both their technical and behavioral skills, to be able to execute their activities as effectively as possible. Interestingly, the HPFF factor Role Clarity not only has a logical relation with the HPFF factor Personal Development but also a direct, albeit weak, relation with finance function performance. A possible explanation is that the performance element "Financial professionals are very satisfied with the financial function" is positively influenced, as financial professionals know what is expected from them and can be sure that the organization will help them to meet those requirements.

Figure 1 also shows that three of the HPO factors have a direct positive influence on finance function performance. This was to be expected, as continuous improvement is an important activity of the finance function; long-term orientation is key to maintaining good relations with the organization's other functions and with external stakeholders (e.g. shareholders, the tax office), while good management is always required for a function to operate smoothly. It is only logical, then, for these HPO factors to show a correlation with most HPFF factors. The HPO factors Openness and Action Orientation and Employee Quality only have an indirect positive influence on performance through their correlations with several HPFF factors.

A second model explored the relationship between HPO and HPFF factors as such. For this model, the five HPO factors were included alongside the five HPFF factors to test the strength of connections between all combinations of factors. To avoid overfitting, this was performed using two separate models: one connecting all HPO to all HPFF factors, and a second connecting all HPFF to all HPO factors. Error terms were also modeled. The results of the two models showed high convergence in the sense that all unidirectional connections present in one model were also present in the other. Model fit was good (HPO → HPFF: CFI = 0.997; RMSEA = 0.034; CMIN/df = 1.467; RMR = 0.010; AGFI = 0.958; HPFF → HPO: CFI = 0.991, RMSEA = 0.084; CMIN/df = 2.784; RMR = 0.026; AGFI = 0.898). Only results showing statistically significant connections are displayed in Figure 2, which shows that the HPO and HPFF factors are strongly related to each other, as was expected from the above-described theoretical considerations.

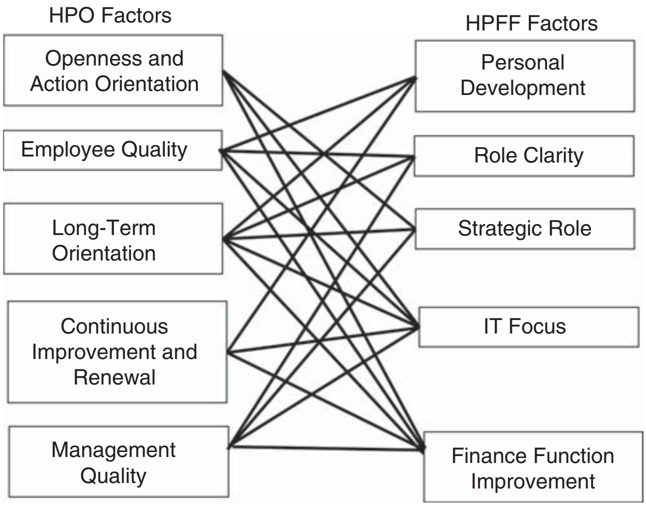
6.4 HPFF scores

Based on the HPFF factors and their characteristics, it is possible to calculate the HPFF scores for participating organizations. Figure 3 depicts the average HPFF scores.

An HPFF is assumed to have an average score of at least 8.5, just as for HPOs (de Waal, 2012). Figure 3 shows that none of the participating organizations have an HPFF, although satisfaction with the performance of the current finance function is on average quite acceptable. The participating organizations' finance functions are currently relatively strong in their strategic role, while their main area for improvement is in developing their people.

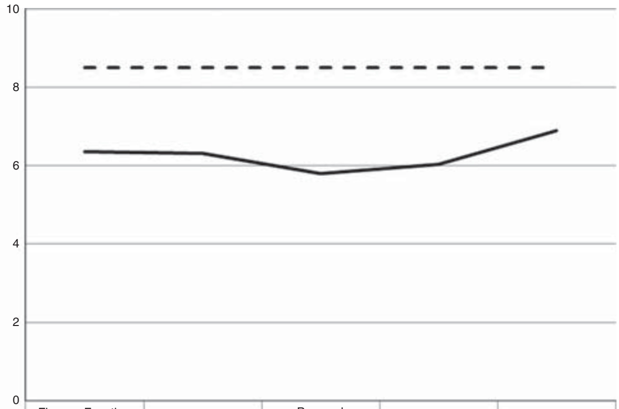
6.5 Improvement opportunities

Despite many finance functions endeavoring to implement improvements in recent years, these improvements have not yet been particularly effective, as can be seen in Figure 3. It could be that, given the recentness of these improvements, their effects are not yet sufficiently noticeable: many organizations have just extricated themselves from an economic crisis that gave little scope for improvement activities. Another plausible



Note: Lines indicate connections that are statistically significant at the $p < 0.05$ level

Figure 2.
Relationship between the HPO and HPFF factors



	Finance Function Improvement	IT Focus	Personal Development	Role Clarity	Strategic Role
HPFF (AVG=8.5)	8.5	8,5	8,5	8,5	8,5
All respondents (n=396, AVG=6.1, PERF=7.0)	6.3	6,3	5,8	6,0	6,9

Notes: AVG, average quality of finance function; PERF, finance function performance

Figure 3.
Average HPFF scores per participating organization

explanation is that the finance functions have been unsure exactly where to focus their improvement efforts, as the literature gives so many suggestions. The detailed scores for the HPFF characteristics (see Appendix 4) indicate three main improvements that will help finance functions to focus their efforts on the areas that most influence performance:

- Make improvement efforts more effective, especially for business managers. Although implementing improvements is actively encouraged (HPFF characteristic 4), financial professionals should be allowed more time to work on these (3), and the execution of improvement activities should be more structured (1, 2). Among other benefits, these improvements should make it possible for business managers to handle their own financial reporting matters (6). This will free up time for the finance function to undertake even more improvement activities and to strengthen their strategic role, in turn increasing the satisfaction of operations with the finance function.
- Increase IT knowledge: advancing automation will have an increasingly larger impact on the finance function in the near future. There is, therefore, an urgent need for the finance function to increase its knowledge about the software applications available in the market that can best help the organization (9, 12), and to better understand how to install and use this software (7). The latter is especially important as the majority of IT software implementations still fail, i.e., do not bring the predicted advantages (Garg and Garg, 2013; Boyton *et al.*, 2015). Also, more budget should be freed up for IT (10) as many routine processes need urgent automation (8, 13).
- Increase the quality of financial professionals: to deal with expected growth in the sophistication of the HPO, more attention is urgently needed to the structured development of skills, knowledge and behaviors in the finance function. Each financial should have their own personal development plan (16), which should be tailored to the financial role they are performing (17, 18, 19). In addition, financial professionals should be allowed enough time to follow technical and personal development training sessions, so as to actually increase their expertise (14, 15).

7. Conclusion, limitations and future research

This study's goal was to develop a framework for the HPFF in such a way that an explicit link with the HPO could be guaranteed. Based on the HPO framework and an extensive literature review, potential HPFF characteristics were identified that were validated through data collected with a questionnaire. The results show that the five-factor HPFF framework – Finance Function Improvement, IT Focus, People Development, Role Clarity and Strategic Role – has a direct positive influence on finance function performance and a clear relation with the HPO framework. The research also yielded several practical recommendations for improving the finance function to the level of an HPFF. As such, the main managerial implication of the study's results is that CFOs and their finance functions can now measure their level of high performance and identify tangible opportunities for improvement, so as to become (even) better business partners for the organization's management. The study's principal theoretical contribution is to identify, for the first time, the contours and factors of an HPFF. This makes it possible for a finance function to take a pioneering role in transforming its organization into an HPO: by taking the lead in pursuing high performance, it can thus become a role model for the rest of the organization.

There are several limitations in this research. Data were only collected from two European countries, so one should be careful in generalizing the HPFF factors to finance functions of organizations in other countries and global regions. Future research should be replicated in other countries, especially in a non-western setting. There was also only limited data from governmental organizations, so future research could concentrate on collecting more respondents in that sector. This research did not explore whether strengthening the HPFF factors, i.e., acting on the given improvement suggestions, will actually increase finance function performance. Future research should longitudinally evaluate the effectiveness of the HPFF framework. Such research could also examine whether an increased HPFF score is associated with an increased HPO score and better organizational performance.

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Appendix 1. The five HPO factors and their 35 characteristics

Continuous improvement

(1) The organization has adopted a strategy that sets it clearly apart from other organizations.

(2) In the organization, processes are continuously improved.

(3) In the organization, processes are continuously simplified.

(4) In the organization, processes are continuously aligned.

(5) In the organization, everything that matters to performance is explicitly reported.

(6) In the organization, both financial and non-financial information is reported to organizational members.

(7) The organization continuously innovates its core competencies.

(8) The organization continuously innovates its products, processes, and services.

Openness and action orientation

(1) The management frequently engages in dialogue with employees.

(2) Organizational members spend much time on communication, knowledge exchange and learning.

(3) Organizational members are always involved in important processes.

(4) The management allows making mistakes.

(5) The management welcomes change.

(6) The organization is performance-driven.

Management quality

(1) The management is trusted by organizational members.

(2) The management has integrity.

(3) The management is a role model for organizational members.

(4) The management applies fast decision making.

(5) The management applies fast action taking.

(6) The management coaches organizational members to achieve better results.

(7) The management focuses on achieving results.

(8) The management is very effective.

(9) The management applies strong leadership.

(10) The management is confident.

(11) The management is decisive with regard to non-performers.

Employee quality

(1) The management always holds organizational members responsible for their results.

(2) The management inspires organizational members to accomplish extraordinary results.

(3) Organizational members are trained to be resilient and flexible.

(4) The organization has a diverse and complementary workforce.

Long-term orientation

(1) The organization maintains good and long-term relationships with all stakeholders.

(2) The organization is aimed at servicing the customers as best as possible.

(3) The organization grows through partnerships with suppliers and/or customers.

(4) The management has been with the company for a long time.

(5) The organization is a secure workplace for organizational members.

(6) New management is promoted from within the organization.

Appendix 2. The five HPFF factors and their 28 characteristics

This appendix provides detailed information on the results of the factor analysis on the HPFF items.

HPFF characteristic	F1 Finance Function Improvement	F2 IT Focus	F3 Personal Development	F4 Role Clarity	F5 Strategic Role
1. In our financial function, improvement efforts are tracked and evaluated using performance indicators	0.674				
2. In our financial function, improvements are implemented in a structured way	0.597				
3. In the past year, I have had enough time to make my work activities more efficient and effective	0.597				
4. In our financial function, implementing improvements is actively encouraged	0.593				
5. In our financial function, processes are executed as much as possible in a uniform way and in one place, so that expertise about these processes is bundled and centralized	0.428				
6. In our organization, managers engage in financial self-service. (i.e. handle their own financial reporting matters)	0.416				
7. Our financial function is capable of implementing the latest IT software		0.885			
8. In our financial function, all routine processes have been fully automated		0.821			
9. Our financial function has much IT application knowledge		0.731			
10. Our financial function has sufficient annual budget at its disposal to accelerate its automation and digitalization		0.719			
11. In our financial function, automation and digitalization are high priorities		0.671			
12. Our financial function is aware of the current and newest applications and possibilities of IT software		0.764			
13. Our financial function spends less and less time on routine activities		0.430			
14. In the past year, I have undertaken sufficient technical training to be able to excel in my work activities			0.880		
15. In the past year, I have undertaken sufficient personal development training to be able to excel in my work activities			0.870		
16. In our financial function, everyone has a personal development plan			0.704		
17. In our financial function, there is a clear description of the behavioral requirements for each financial role				0.612	
18. In our financial function, there is a clear description of the technical requirements for each financial role				0.591	

(*continued*)

Table AI.
Detailed loadings of the items on the HPFF factors

HPFF characteristic	F1 Finance Function Improvement	F2 IT Focus	F3 Personal Development	F4 Role Clarity	F5 Strategic Role
19. In our financial function, there are specific development programs for each financial role				0.433	
20. Our financial function is seen as a serious partner during strategic discussions					0.875
21. Our financial function has important input into each decision of strategic importance					0.832
22. Other departments regularly spontaneously seek advice from our financial function when making important decisions					0.791
23. Our financial function is actively involved in all the important processes conducted in the organization					0.680
24. Our financial function actively seeks possibilities for cooperation and collaboration with operations					0.522
25. Our financial function increasingly performs value-adding activities for operations					0.518
26. Our financial function regularly collaborates with operations to examine possibilities for creating more value-adding activities for the latter					0.477
27. Our financial function proactively adapts prognoses on the basis of important developments					0.465
28. The latest prognoses, as developed by our financial function, are given priority during important management decision-making					0.457

Table AI.

	Initial eigenvalues			Extraction sums of squared loadings		
Component	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	14.196	41.754	41.754	14.196	41.754	41.754
2	2.336	6.871	48.625	2.336	6.871	48.625
3	1.833	5.392	54.018	1.833	5.392	54.018
4	1.348	3.964	57.982	1.348	3.964	57.982
5	1.163	3.419	61.401	1.163	3.419	61.401

Note: Five factors in total explain 61.4 percent of variance, of which the first factor explains almost 42 percent

Table AII. Total variance explained in exploratory factor analysis of HPFF factors

Component	1	2	3	4	5
1	1.000	0.363	0.406	0.494	0.155
2	0.363	1.000	0.385	0.410	0.070
3	0.406	0.385	1.000	0.372	0.194
4	0.494	0.410	0.382	1.000	0.235
5	0.155	0.070	0.194	0.235	1.000

Note: This table shows that the correlations between factors are moderate and well under the cut-off usually applied to assess discriminant validity ($r = 0.7$)

Table AIII. Correlations between the five HPFF factors

Table AIV.
Detailed loadings of the items on the finance function performance factor

Performance characteristic	Finance function performance
You are very satisfied with the financial function	0.911
The financial function is very effective	0.899
The financial function is very efficient	0.881
The internal client is very satisfied with the financial function	0.844
The financial function always has an important role to play in decision-making in the organization	0.661

Table AV.
Total variance explained in exploratory factor analysis of the finance function performance factor

	Initial eigenvalues			Extraction sums of squared loadings		
Component	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	3.563	71.252	71.252	3.563	71.252	71.252

Notes: Only one factor scored an eigenvalue higher than 1. This factor alone explained 71.25 percent of variance

Appendix 3. The HPFF framework

This appendix gives a schematic overview of the bivariate correlations between the HPFF factors. The connection weights from the SEM analyses were used to investigate the influence of HPO and HPFF factors on finance function performance factor (see Table AVI).

Table AVI.
Overview of the bivariate correlations between the HPFF factors

	Estimate	SE	CR	p	Label
HPFF_IT←HPFF_FFI	0.778	0.221	3.525	***	par_40
HPFF_IT←HPFF_SR	0.084	0.201	0.420	0.674	par_41
HPFF_RC←HPFF_FFI	0.332	0.069	4.835	***	par_47
FF_1←HPO_CI	0.213	0.040	5.313	***	par_1
FF_1←HPO_MQ	0.119	0.034	3.499	***	par_2
FF_1←HPO_LTO	0.148	0.028	5.328	***	par_3
FF_1←HPFF_FFI	0.113	0.039	2.893	0.004	par_4
FF_1←HPFF_SR	0.195	0.038	5.100	***	par_5
FF_1←HPFF_IT	0.151	0.033	4.535	***	par_6
FF_1←HPFF_RC	0.085	0.027	3.118	0.002	par_7
HPFF_PD←HPFF_FFI	0.673	0.084	8.051	***	par_45

Note: $^{***}p \leq 0.001$

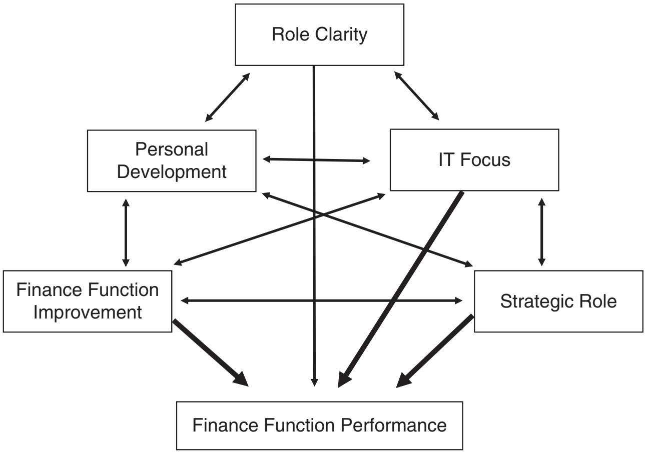

Figure A1.
Schematic overview of the HPFF framework

Appendix 4. Detailed scores for the HPFF characteristics

HPFF factor	No.	HPFF characteristic	Score
Finance Function Improvement	1	In our financial function, improvement efforts are tracked and evaluated using performance indicators	5.4
Finance Function Improvement	2	In our financial function, improvements are implemented in a structured way	6.7
Finance Function Improvement	3	In the past year, I have had enough time to make my work activities more efficient and effective	6.2
Finance Function Improvement	4	In our financial function, implementing improvements is actively encouraged	7.6
Finance Function Improvement	5	In our financial function, processes are executed as much as possible in a uniform way and in one place, so that expertise about these processes is bundled and centralized	6.9
Finance Function Improvement	6	In our organization, managers engage in financial self-service	5.3
IT Focus	7	Our financial function is capable of implementing the latest IT software	6.0
IT Focus	8	In our financial function, all routine processes have been fully automated	5.6
IT Focus	9	Our financial function has much IT application knowledge	6.6
IT Focus	10	Our financial function has sufficient annual budget at its disposal to accelerate its automation and digitalization	6.1
IT Focus	11	In our financial function, automation and digitalization are high priorities	7.5
IT Focus	12	Our financial function is aware of the current and newest applications and possibilities of IT software	6.0
IT Focus	13	Our financial function spends less and less time on routine activities	6.3
Personal development	14	In the past year, I have undertaken sufficient technical training to be able to excel in my work activities	6.2
Personal development	15	In the past year, I have undertaken sufficient personal development training to be able to excel in my work activities	6.2
Personal development	16	In our financial function, everyone has a personal development plan	5.0
Role Clarity	17	In our financial function, there is a clear description of the behavioral requirements for each financial role	6.3
Role Clarity	18	In our financial function, there is a clear description of the technical requirements for each financial role	6.6
Role Clarity	19	In our financial function, there are specific development programs for each financial role	5.1
Strategic Role	20	Our financial function is seen as a serious partner during strategic discussions	7.2
Strategic Role	21	Our financial function has important input into each decision of strategic importance	6.9
Strategic Role	22	Other departments regularly often spontaneously seek advice from our financial function when making important decisions	6.9
Strategic Role	23	Our financial function is actively involved in all the important processes conducted in the organization	6.8
Strategic Role	24	Our financial function actively seeks possibilities for cooperation and collaboration with operations	6.7
Strategic Role	25	Our financial function increasingly performs value-adding activities for operations	7.1

(*continued*)

Table AVII. Overview of the HPFF factors and characteristics and accompanying scores

HPFF factor	No.	HPFF characteristic	Score
Strategic Role	26	Our financial function regularly collaborates with operations to examine possibilities for creating more value-adding activities for the latter	6.9
Strategic Role	27	Our financial function proactively adapts prognoses on the basis of important developments	6.9
Strategic Role	28	The latest prognoses, as developed by our financial function, are given priority during important management decision making	6.7
Finance function performance	a	The internal client is very satisfied with the financial function	7.0
Finance function performance	b	You are very satisfied with the financial function	7.0
Finance function performance	c	The financial function is very efficient	6.7
Finance function performance	d	The financial function always has an important role to play in decision making in the organization	7.1
Finance function performance	e	The financial function is very effective	7.0

Table AVII.

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