

A Study on Professional Service Firms Exploring Human Competence Valuation as an Alternative Approach in Financial Valuation Models

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Abstract:

This article advocates for valuing human competence alongside traditional financial assets, particularly in Professional Service Firms (PSFs). It proposes a method that emphasizes realism, simplicity, and a focus on human resources. Through a mixed-methods approach involving a literature review, case studies, and surveys, the article demonstrates the potential of human competence valuation to uncover the true drivers of organizational success. While facing challenges such as time consumption and biases, this approach offers valuable insights into employee performance and organizational value, paving the way for a culture of competence-driven performance.

1 Introduction

Financial valuation has been the centre of vigorous parleys in the subject of corporate finance. Some of the popular financial valuation techniques such as net present value, discounted cash flow, economic value-added, return on asset ratio or return on equity ratio have become multi-purpose techniques. It means that any enterprise be it manufacturing, trading or a professional service firm could be valued using these techniques.

Damodaran (2012) argues that valuation holds significant importance and plays a key role in multiple areas of finance such as corporate finance, acquisitions, portfolio management, and mergers. According to Damodaran valuation is not an objective exercise, and any preconceptions and biases that an analyst brings to the process will find their way into the valuation.

Every asset, financial as well as real, has value. The key to successful investments and managing these assets lies in understanding the sources of the value. Any asset can be valued correctly, but some assets are easier to value than others, and the details of valuation will vary from case to case.

Perceptions of value may be all that matters when the asset is a painting or a sculpture, but investors do not buy more assets for aesthetic or emotional reasons; financial assets are acquired for the cash flows expected out of them in the future. Consequently, perceptions of value must be backed up by reality, which implies that the price that is paid for any asset should reflect the cash flows it is expected to generate (Damodaran, 2012)

These techniques were not wrong and are still not wrong, it is just that I have attempted to find another alternative. We have realized that every concern has a prime resource on which it relies for its business. This prime resource is the most important input of an enterprise. It is so important that without it, the mere existence of that enterprise becomes impossible. It is the **human capital** of an enterprise.

A telecom company might say that its prime resource is telephone cables and towers. I would differ by saying that if you do not have people to operate it, such infrastructure would be useless and worthless. Similarly, a bank would say that its network system is its prime resource. An argument could be put forward that the employees of the bank are required to operate the network system.

However, taking one step ahead, is it the human capital or the competence that human capital possesses? Well, as most of us (the readers and the common people) would have guessed, it is the **competence of such human capital**. In the later part of the article, we have justified the importance of human competence against human capital. Based on such premise I have also carried out human competence valuation of a professional service firm.

2 Literature Review

What are PSFs and why study them? PSFs offer services to clients within areas such as e.g. accounting, advertising, architecture, communication consulting, engineering design, legal advice, and management consulting (e.g. Maister, 1982; 1993; Greenwood, Hinings & Brown, 1990; 1994; Hinings, Brown & Greenwood, 1991; Løwendahl, 1992; 1997; Morris & Empson, 1998; Empson, 2000; Robertson, Scarbrough & Swan, 2003; Greenwood, Hinings & Cooper, 2004; Greenwood & Suddaby, 2006; Brock, 2006). Based on their services, PSFs are argued to have characteristics that distinguish them from other types of companies (Løwendahl, 1992; 1997).

“Professional Service Firm” (PSF) is a descriptive label applied to organizational forms that have certain features. Widely accepted definitions are difficult to come by, but Empson (2000) offers this broad one: It is “any firm that uses the specialist technical knowledge of its personnel to create customized solutions to clients.” PSFs are “support systems” for the industry and business community. These are referred to as “experts” for providing advisory or consultancy services. PSFs have evolved from being simple consultants to being partners in every decision of the management of an enterprise.

PSFs are in the *business of services* and their products are time and talent (Maister, 2000). PSFs today are not only assisting enterprises to make informed decisions but are discovering new theories and practices that are used by enterprises throughout the world.

The life of an employee at PSF is very challenging, motivating, and dynamic. Individuals working in PSF must be very agile and alert to the ever-changing political, economic, social, technological, and demographic environment. Their advice can make or break the business of an organization. In addition, the services typically adhere to professional norms of conduct and involve a high degree of customization and interaction with clients (Løwendahl, 1992; 1997). PSF services, thus, can be characterized as knowledge-intensive and little routinized (e.g. Empson, 2000).

PSFs are further sorted under the broader category of knowledge-intensive firms (KIFs) (Løwendahl, 1997), as KIFs overlap with, and include, the notion of professional service organizations (Alvesson, 2001). However, not all KIFs deliver professional services (Løwendahl, 1997). Since PSFs rely primarily on, and in many cases exclusively, on professional expertise in their value-creating activities, they can be seen as extreme types of knowledge-intensive firms (Løwendahl, 1997). Together, these features make PSFs interesting to study. In addition, PSFs are worthy of study because they constitute a significant sector of the economy, whether measured by their size, numbers, or influence (Greenwood et al., 2005).

The keyword in the business of PSF is advice. A highly competent human capital is required to give correct, appropriate, viable and timely advice. Some of the salient features of PSF are a high degree of customization and personalization. Both features demand a PSF to attract and retain highly skilled individuals (Maister, et.al 1993). In other words, skilled individuals or human capital is the prime resource of a PSF.

First, since PSFs are seen to create value for clients through knowledge-based intangible services, this makes them especially dependent on their ability to continuously develop competence to strengthen competitiveness vis-à-vis clients and to recruit and retain the best staff (Maister, 1982; 1993; Løwendahl, 1992; 1997). Second, PSFs are seen to create value through processes that require them to know more than their clients and competitors, either in terms of expertise or in terms of experience from similar problem-solving situations (Løwendahl, 1992; 1997). Third, a basic assumption is that this competence process primarily occurs by employing human beings (e.g. Nordhaug, 1993). According to Maister(1993:XV), PSFs represent “the ultimate embodiment of that familiar phrase “our assets are our people”. Due to client contact and adjustments of service delivery according to client needs, what PSFs sell is “frequently less the services

of the firm per se than the services of specific individuals (or teams of individuals)” (Maister, 1993:XV). Hence, the competence of individuals is argued to be a core asset in PSFs (Løwendahl, 1992; 1997; Maister, 1993; Empson, 2000). This makes the development of individual competence crucial to PSF value creation (Løwendahl, Revang & Fosstenløkken, 2001) and competitive ability.

As evident from the earlier paragraph, human capital plays a pivotal role in the functioning of a PSF. It is the prime resource of a PSF. However, it is not the presence of human capital that is important, but the competence of the human capital that could provide a PSF an edge over competitors.

Human resources could be any person who would work in a PSF, but human competence is the mettle within such human resources. It is the energy and the source of all activities carried out by the human resource. The higher the competence – the higher would be the efficiency, productivity, and effectiveness. There have been different schools of thought for human competence. However, in this article, we have taken work from those thoughts, which are relevant to a PSF.

Human competence has been widely defined in management literature as attributes possessed by an employee such as knowledge, skills and attitude (KSA). KSA in simple terms refers to a person's formal education and learning. It is easily measurable by grades, points or percentages. However, according to other research, the conception of work or understanding of the employee towards work precedes the traditionally pounded attribute theory that is considered human competence at work (Sandberg, 1994).

Professional education, which could be referred to as KSA in this article, is important to enter the workforce of a PSF, but when two persons with the same KSA in the same subject tend to perform differently and deliver different results it becomes a matter of individuals' understanding of their work.

The human capital in a PSF is required to understand the business of the client to render personalized services. They are also expected to understand the system, process, nature, and type of transactions of the client's business. Further to that, they are also expected to understand the peculiarities, intricacies, and ambiguities of a business. Thus, **the understanding** of a person working in a PSF plays an essential role in their service delivery.

Therefore, while calculating human competence valuation, we have taken both the parameters of competence – KSA and an individual's understanding of work. Both parameters are vital components of human competence at work in a PSF. It is with this perspective I feel that human competence valuation could also be applied to the valuation of a professional service firm.

3 Data and Methodology

3.1 Research Objective

Evaluate the effectiveness of human competence valuation as an alternative to traditional financial valuation methods, specifically in the context of Professional Service Firms, to enhance accuracy and relevance in assessing firm value.

3.2 Research Methodology

The research methodology involves an extensive literature review to understand existing perspectives on financial valuation, human capital valuation, and the distinctive characteristics of Professional Service Firms (PSFs). The study employs a mixed-methods approach, utilizing in-depth case studies of selected PSFs to compare outcomes of human competence valuation against traditional financial valuation methods. Surveys and interviews with industry professionals provide both quantitative and qualitative insights into the perceived significance of human competence in financial valuation. Statistical analysis of survey data and financial metrics aims to uncover correlations between human competence and firm performance. The research culminates in the development of a conceptual framework, integrating human competence valuation into financial models, tailored to the nuanced context of PSFs.

Based on the notion that the competence of human capital represents a critical resource for PSFs, this study is anchored within the resource-based view of strategy, which emphasizes intangible resources as key to value creation and competitive ability. The Human Competency (e.g. Dierickx & Cool, 1989; Barney, 1991; Amit & Schoemaker, 1993; Peteraf, 1993; Ahuja & Katila, 2004; Acedo et al., 2006) suggests that a firm's heterogeneity underlies competitiveness and that resources form the basis for differential company performance. As stated previously, a lot of attention has been given to the importance of firm's intangible resources (Itami, 1987; Løwendahl, 1992; 1997; Teece, Pisano & Shuen, 1997) such as knowledge (e.g. Grant, 1996; Spender, 1996; Nonaka, Nishiguchi & von Krogh, 2000; Carlsen, Klev & von Krogh, 2004) or competence (e.g. Nordhaug, 1993; Hamel & Heene, 1994; Sanchez, Heene & Thomas, 1996; Nordhaug et al., 2006) as the primary drivers of competitive ability.

In the existing methods of financial valuation such as discounted cash flow or net present value method, there are more estimates than reality. For instance, the beta or the future receivables are estimates that are generic data applied to specific cases. However, valuation is very management sensitive. Every management has a unique way of working and can create different impacts on the performance of business. This managerial ability to influence the business is often omitted in the computation of financial valuation. However, *real options* theory considers such management ability as well.

Human capital valuation is also an important method of valuation. A model promoted by Doe and Smith (2019) is a cost model based on the acquisition cost, including replacement and training costs and the opportunity cost of human assets. Another model promoted by Lev & Schwartz (1971) is based on the likely future earnings of an employee until retirement.

However, all the existing methods ignore the competencies of individuals working in a firm. The amount compensated by the insurance company is the price of the hand but the worth that you would place on it is the value of your hand. The salary and other emoluments that a PSF would pay to its employees is the price for hiring the human capital, but their worth or their competence is the value to the firm.

When we pay for a product, what are we buying? Are we buying the product or the attributes of the product? The product, *right*? Well, the answer could match a person who might think in a narrow sense. But a broader understanding, suggests that we are not only buying the product but also the attributes of the product such as its colour, texture, characteristics, and even usage. Thus, we place the value of a product based on its attributes. We would have never bought a product, just because it was a product. Even a lamp piece on the side of your bed would be placed to add a look to the room or for reading or some other reason. There might be many products lying in your basement or garage whose attributes are finished or destroyed, so they would not be usable anymore. You may place no value on them and sell them off for petty price in a garage sale.

The same analogy can be applied to the human resources of an enterprise. For instance, take human resources that you have hired for your business. In that case, you begin to pay hire charges (salary and other emoluments). The salary and other emoluments are the prices for the human resources. Now introducing the concept of value, we find that the human resource who has been hired might be adding greater, lesser or equal financial value to the business than his or her salary and other emoluments. The ability of that human resource to deliver greater, lesser or equal value depends upon his or her competence. Correlating to the earlier paragraph, the competence of the human resource is their attribute, and so eventually the human resource is as valuable as much as the competence they have. Thus, competence decides the performance of that individual. It is therefore necessary to value human competence rather than human capital.

To explain with an example, I have described a real-life case study of a chartered accountant firm. It is a small firm of eight people (8), including the proprietor. The firm did not want it to be named. The firm's annual revenue ranges between Rs.1.1 million to Rs.1.3 million. All the employees including the proprietor were asked to assemble at a particular place. They all were told and explained what human competence valuation is. They were then given a questionnaire to respond.

4 Theoretical Framework

The hypothesis proposed in this study is that human competence valuation could be an alternative method to traditional financial valuation techniques. It further hypothesises that it could enhance the accuracy and relevance of assessing firm value, particularly in the context of Professional Service Firms (PSFs). This hypothesis is based on the premise that human competence, is a critical resource in PSFs, and contributes significantly to value creation and competitive advantage. The study aims to demonstrate that by incorporating human competence valuation into the valuation process, a better understanding of firm value can be achieved.

In Table 4:1, a comparison between the conventional valuation techniques such as discounted cash flow and human competence valuation is done.

Table 4:1 – Comparison of discounted cash flow method and human competence valuation		
Sr.	Discounted Cash Flow Method	Human Competence Valuation (HCV)
1	It is largely based on estimates, as the internal components of valuation are estimates such as beta , future earnings, weighted average cost of capital etc.	HCV is useful for valuation because it is based on actual data, in which there are no assumptions
2	A complex method involves a lot of formulas and has only limited application.	HCV is a simple method involving basic mathematics and analysis is easy to understand and also take corrective action.
3	It involves taking all the areas of a PSF into consideration	It involves only the human resource area of a PSF. Other areas such as finance, marketing, and process are essentially ignored.
4	It is financial in nature, meaning it involves many numbers.	It is a combination of finance and human resources, which makes it very “human” and easy to understand and apply.

However, human competence valuation could be considered a risky method of valuation on two grounds – firstly, when the biases of the valuer are engaged in the drafting of the valuation document and secondly, the valuation is conducted on human beings, who are very socially reactive (Dunbar, 2016) and hence the valuation itself could go wrong based on the mental condition of the human resource.

5 Empirical Results and Analysis

Now let us embark on the valuation of a PSF based on the new method suggested in this article. Apart from calculating the value of a PSF, some other outcomes of the human competence valuation are as follows:

- Quantification of the competence level of the employees
- Identification of the variance of human competence in the firm
- Identifying which employee is more competent as compared to their salary/income.

5.1 Step 1, the educational parameter:

The valuation process begins with assigning points to KSA. KSA has been divided into six categories of qualification. The lowest point for the lowest-level qualification is 1 and the highest point for the highest-level qualification is 5. The qualification refers to the last educational qualification. Table 5:1 would clarify the point system.

Table 5:1 Categories of KSA	
Qualification	Points
Doctorate	5
Masters / Professionals	4
Post Graduate Diploma	3.5
Bachelors	3
Diploma	2
Graduate Certificate	1

5.2 Step 2, the questionnaire:

The candidate was given a questionnaire (Annexure A). The questionnaire had been designed with the consultation of the owner of the PSF. Each question had five options and they were scaled from -2 marks to 3 marks, (with zero (0) not being any mark) based on the level of importance and relevance assigned by the owner (employer) of the PSF. Each question had an equal weightage. There was one subjective question, for which the owner had given certain parameters as the probable appropriate answer. The maximum score a candidate could score is 3 x 10 questions (30 marks) and the lowest is -2 x 10 questions (-20 marks). The weightage of each option has been shown in Annexure B of this article.

5.3 Step 3, the final total:

In the third step, each candidate's total points were calculated. The total points consisted of two parts (KSA + Questionnaire), so typically if the candidate has a doctorate and gets all answers in the questionnaire correct, then they would get 35 points, likewise, anyone can calculate based on the response received. The key to calculating competence is not a numerical value, but how an organization identifies the "understanding" of a candidate as a key competence.

5.4 Step 4, the competence value

An average of the total points scored by each employee was taken. The average was then multiplied by the salary/income of the respective employee. The value in the "Competence Value" in Table 5:2 indicates the quantitative competence value of each employee. The total in Table 5:2 indicates the collective competence of the organisation.

Table 5:2 The competence calculation table				
	Score out of 35	Average	Annual Salary / Income	Competence Value
	A	B	C	D=C*B
Employee 1	7.00	0.64	Rs.42,000	26,918.18
Employee 2	16.50	1.50	Rs.80,000	120,000.00
Employee 3	20.00	1.82	Rs.24,000	44,181.82
Employee 4	18.50	1.68	Rs.40,800	69,122.73
Employee 5	14.00	1.27	Rs.40,800	52,309.09
Employee 6	14.00	1.27	Rs.20,400	26,345.45
Employee 7	20.50	1.91	Rs.150,000	279,545.45
Proprietor	21.00	1.86	Rs.250,000	477,272.73
Total...				10,95,695.45

5.5 Findings

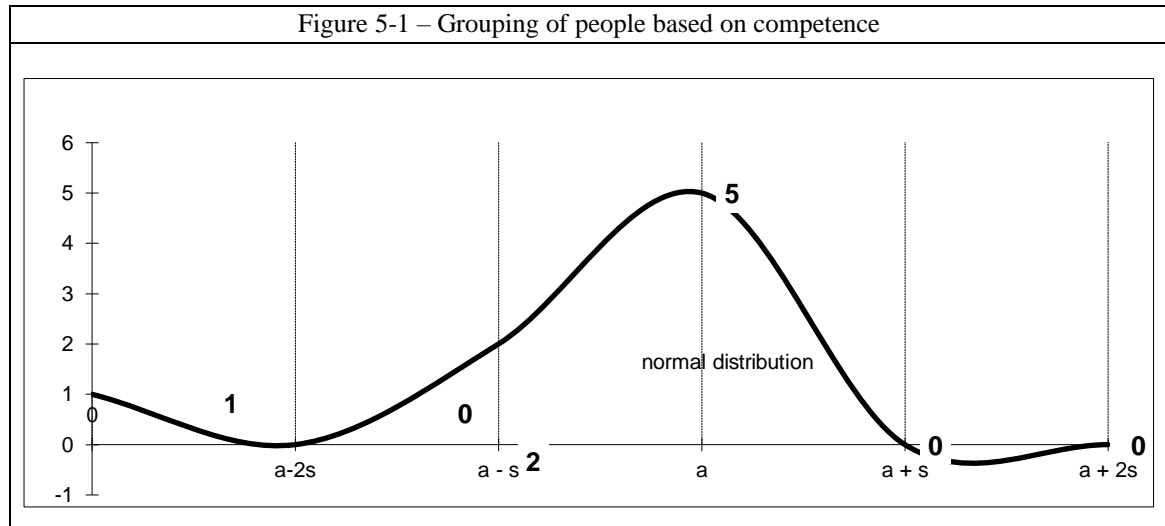
A summary of the result shows that most of the employees have higher competence value as compared to their salary. The collective competence value is close to the current annual revenue of the firm. This could mean that the human competence value of the employees is as good as the firm's current value. The PSF also inferred that if they were to sell their "practice" to another firm with the current employees, then they could ask for the amount based on the competence value multiplied by the probable number of years that person could serve the organisation.

The other derivation such as, the grouping of people with similar competencies is also done. The average (a) of the competencies of all the employees is 16.44. The standard deviation (s) of the competencies of all the employees is 4.71. The grouping is shown in Table 5:3. The second column in Table 5:3 indicates the measures that are computed based on the average (a) and standard deviation (s). The third column indicates the number of persons falling within respective ranges. It is a good indication for the firm that more number of its employees is on the other side of the average.

Table 5:3 – Grouping of people based on competence		
	Measure	# of persons falling within the competence range
	0	1
a-2s	7.02	0
a - s	11.73	2

a	16.44	5
a + s	21.15	0
a + 2s	25.86	0

Notes:
a = average
s = standard deviation
2s = 2*standard deviation



It can be inferred from the curve (figure 5-1) that there are more people in the average (a) plus standard deviation (s) range. It means that those must be trained and developed for going to the next section, where currently there is nobody. The other employees must be trained so that they at least achieve the average. Either the one with the lowest competence could be trained or could be laid off or could be offered a lower salary. The salary of such a low competent person could be later increased upon the rise in their competence level.

6 Conclusion and scope for further research

1. Human Competence Valuation is very time-consuming and involves all the employees of a firm to answer the form at once, which would be probably difficult.
2. If it is being conducted at multiple locations, then the element of confidentiality can be affected.
3. It is also prone to criticism by the employees that the questions were not understandable and have been framed to let us down. Such and many more arguments could probably erupt from the employees.

The above list is not exhaustive, and there could be other limitations as well. However, it seems that when the cost involved is compared with the resultant benefit, the benefits would outweigh the costs. Neither management nor accounting is rocket science. To some extent, accounting is still rocket science in which every debit would have a credit, but management is a far exception. A particular management alternative might boost the morale of an employee whereas it might damage the morale of another employee.

Likewise, in the theory that I have just introduced, research is still open. People with different thoughts and ideas could probably take this thought further. However, human competence is certainly necessary for organizations like PSF, which are human capital intensive. The idea is to raise the veil of human capital valuation and carry out human competence valuation. It would not only unveil the true potential of the human capital but also provide an overview of the most effective and efficient employees of the organization.

The human competence valuation could also be applied to other types of enterprises such as trading organizations or manufacturing organizations, but it would require a change in the model of study and analysis. I am very confident that subject to certain limitations, human competence valuation is ideal for any enterprise and could be the foundation of the success story of an enterprise.

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