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## **A Service Design Framework: A Multiple Case Study for the Supply Chains of Global Professional Service Firms**

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### **Abstract**

*The purpose of this study is to develop a framework for service design in the internal supply chains of global professional service firms (GPSFs). Multiple case studies (three) with qualitative approach, involving interviews, documentation, archival records and observation were used to develop a strategic level framework for service design in the supply chains of GPSF. Literature about service design in different service sectors has been found but very limited amount of work has been carried out with regard to GPSFs. A series of steps exist to design and deliver the service and that may vary from service to service. Acceptance mechanism under the laws & regulations of regulatory bodies and sharing methodology with client before the start of the service are some of the distinguishing variables from the existing models. Our proposed framework is developed bridging the clients' needs and organizational practices while keeping in view the requirements from the regulatory bodies. The study provides a platform for the new researchers to fill the gap of service design from supply chain perspective. Future studies can be conducted on other small firms working in the same segment or in other service industries like, financial institutions, law chambers, educational institutes and training firms. The framework is developed with the help of industry professionals through their semi-structured interviews, and can be used by practitioners and academia. This framework can be very helpful for GPSF, other than Big Four, around the globe.*

**Keywords:** *Accountancy Firms, Global Professional Service Firms (GPSF), Multiple Case Study, Service Design, Service Supply Chain and Supply Chain*

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## 1. Introduction

In the current century the competition among the business entities has spread its wings, it is no more a competition of organizations or people but their supply chains. Only the fittest can survive in such multidimensional contest. World's current economic strength is geared up by the service sector and numbers support the facts very clearly (Hauge & Chang, 2019). Many of the manufacturing concerns have repositioned themselves and many other are in the process to generate better revenues from their service units (Song & Sakao, 2017), and this transformation seems a continuing process (Tseng, Lim, Wong, Chen, & Zhan, 2018).

This paradigm shift of the world's economy, has also received attentions from the academic sector. In the last decade a lot of research has been done in the service supply chain. Regardless of the service sector contribution to the world's economies, service sector is far behind in performance and excellence (Dias, Robalo Marques, & Richmond, 2020). Currently, there exists a huge gap for innovation and better service productivity. The complex nature of the service sector has restricted the contribution from academia (Zhang & Chen, 2015).

Service design is a human centered and interactive approach (Busagara, Mossberg, Jani, Anderson, & Mori, 2019) and that is why there is so much complexity involved with everything related to services, starting from 'defining the service' to 'delivering the service' and then 'evaluating the service' (Karwan & Markland, 2006).

Literature has been found with respect to service design in hospitals, healthcare, food industry, transportation, distribution and entertainment industries (Zhang & Chen, 2015), but very limited research has been done in the area of professional and financial service providers or more precisely global professional service firms (GPSFs) (Karmarkar & Apte, 2007). Some of the work found in literature explores GPSFs operations (Brock, Leblebici, & Muzio, 2014; Faulconbridge & Muzio, 2016), particularly how GPSFs are designed in a transnational environment (Greenwood, Morris, Fairclough, & Boussebaa, 2010), how they integrate themselves globally (Boussebaa, 2015) and how local regulatory bodies and institutions mediate GPSFs' ability to work as integrated global entities (Faulconbridge & Muzio, 2016; Muzio, Brock, & Suddaby, 2013; Spence, Dambrin, Carter, Husillos, & Archel, 2015). But nothing has been found with respect to service design for GPSFs supply chains.

The proposed framework can be very helpful for all other GPSFs working in the same sector around the globe. Specifically from local perspective, It will be helpful for all 123 Quality Control Review (QCR) rated and 476 non QCR rated firms registered by Institute of Chartered Accountants of Pakistan (Wasti, 2019) (ICAP.ORG.PK, 2020).

This study has been divided into several parts; the first part includes introduction, second part consists of literature review, third part includes conceptual framework, fourth part consists of methodology, fifth explains analysis and discussion followed by conclusion and bibliography.

## **2. Literature Review**

Service is all about the processes; multiple processes are linked with each other, mostly done simultaneously and rest are interdependent on others (Ulkuniemi, Pekkarinen, & Lin, 2011). Ingredients of a 'service being offered' are mostly intangible and non-physical in nature; but they are part of a linear recipe which includes series of processes, knowledge, skills and some support of material (Goldstein, Johnston, Duffy, & Rao, 2002).

As compared to manufacturing a product, "Servuction" involves two steps 'production' and 'delivery' of the service; as the process of production and delivery cannot be set apart (Karmarkar & Apte, 2007). In servuction most of the times, customer actively participates in the process, but this involvement can ultimately cause a variation in results from the previous servuction results of similar nature (Gummesson, 1990).

A shift from production focused mind set to service oriented mind set has been highlighted by few researchers (Gebauer & Fleisch, 2007; Vargo & Lusch, 2008). A combination of both is also available under the name of 'product-service system', the system is a combination of marketable goods and services that can fulfill certain needs of the customers (Zhang & Chen, 2015). Literature has shown an increase of interest in the process of designing and redesigning which ultimately leads towards better service design (Ulkuniemi, et al., 2011).

Most of the goods vs. service research is done just to demonstrate what their distinct features are. Goods have been referred as tangible but no solid threshold has been defined for service (Secomandi & Snelders, 2011). Because of the fundamental difference between both industries, there is a need of service, specific for supply chain management measures (Tseng, et al., 2018).

Looking from global perspective, contribution of service sector varies from 47 percent to 73 percent depending upon country's income. This sector is significantly contributing in "cross-border trades", attracting foreign direct investments and opening new doors for service suppliers to export (Ahmed & Ahsan, 2011).

The service sector contributes around 60 percent in Pakistan's economy. According to the Pakistan Economic Survey 2018-19, growth rate of service sector was observed 4.7 percent with the highest employment ratio, i.e. 37.6%, as compared to manufacturing, construction and agriculture. Such numbers indicate influencing role of this sector (Wasti, 2019).

## **2.1. Service Supply Chain**

Service Supply Chain has been referred as integration of information, processes, capacity, performance, delivery and financial aspect from one end to another end. These should be managed in a cumulative way from the first tier of supplier to ultimate end consumer (Zhang & Chen, 2015).

## **2.2. Service Design**

Service design brings life to the idea of innovation (Busagara, et al., 2019). Service design includes developing new services and redesigning existing ones. From a service organization perspective; service design is like designing a suitable blend of tangible and intangible components which will support to deliver the service that is being designed. In other words, service design can be referred as bringing the concept from brain to the paper, with the help of some flowcharts and drawings, in such a way that every component of the service must be taken into consideration. It is more important at the planning stage that how the organization perceives and defines their own definition of Service they offer (Goldstein, et al., 2002).

## **2.3. Service Design Tools and Techniques**

(Gummesson, 1990) has referred couple of techniques; the first one is known as “service blueprinting”, second as SOS (Strategy and Organization for Service), also known as quality tree. Third one was originally proposed for “knowledge based organization”.

## **2.4. Service Design Strategy**

(Gummesson, 1990) concluded that a service design strategy should include systematic approach. (Olson, Cooper, & Slater, 1998) proposed step wise strategy; firstly, it should be aligned with supply chain / organizational strategy. Understanding customer requirements comes second and pricing as step three. Lastly, the service provider should take decision for resource allocation and assigning job to a relevant person (Olson, et al., 1998).

## **2.5. Global Professional Service Firms (GPSFs)**

GPSFs offer wide range of advisory services in the fields of management, supply chain, finance, accounting & taxation, law, architectures, information technology, engineering, health sector and many more. Most of their services are knowledge-based and varies from client to client depending upon their needs. Their clients also vary from individual, AOP (association of persons), private and public (listed/unlisted) companies (Jaworski & Patel, 2020). Because of

such an extensive variety of services and range of clients, their position has become quite dominating and influencing to the economies and ultimately to the world. Some of the GPSFs are even greater than “Fortune Global 500 companies” in terms of size and operations (Boussebaa & Faulconbridge, 2016).

## 2.6. Theoretical Support

*Activity theory* is another theory observed in the literature referred with the service design. The whole interaction from service design to service delivery is a complex encounter; which involves many individuals with different personality traits working under different circumstances and environment. This theory emphasized that every activity should be analyzed based on its subject matter, goals, tools, complexity and people involved directly or indirectly (Roy, Shehab, Tiwari, & Morelli, 2009).

*Organizational learning theory* can also support service design, where the theory refers a U-shaped learning curve. This learning curve indicates that if the short term process management is explored it will help to improve current processes, whereas if the emphasized is made on the improvement of long term process it will help to enhance overall organizational competencies (D. X. Ding, 2014; X. D. Ding, 2015).

## 3. Methodology

For the purpose of this study interpretive research frame has been used, which is linked with qualitative research (O’Brien, 1998). Research type of the study is descriptive and exploratory in nature, this type of research deals with “what” and “how” kind of questions (Yin, 2013).

A total of 438 sole proprietors and 164 partnership firms are registered in Pakistan by ICAP (ICAP, 2018). Out of these 602 firms only 123 firms are QCR rated (Wasti, 2019) and we have selected 3 of them.

Table 1: Names of the Case Companies Used

Name of Firm	Local Name	Revenues (Billion US\$)	Employees	Revenue per employee	Headquarter	Source
Pricewaterhouse Coopers (PwC)	A. F. Ferguson & Co.	41.76	250,930	\$164,588	United Kingdom	(PwC, 2018)
Deloitte	Deloitte Yousuf Adil	43.2	286,200	\$150,943	United States	(Deloitte, 2018)

Ernst & Young (EY)	Ernst & Young Ford Rhodes Sidat Hyder KPMG	34.8	260,000	\$133,846	United Kingdom	(EY, 2018)
KPMG	Taseer Hadi & Co	28.96	207,050	\$139,870	Netherlands	(KPMG, 2018)

Source: Respective Websites of the companies

PricewaterhouseCoopers, Deloitte, Ernst & Young and KPMG are the top four professional services providing firms globally, also known as 'BIG Four'. The Big Four conducts the audit of 99% public listed companies of the Financial Times Stock Exchange (FTSE) 100 index. It is a gauge to measure the prosperity of a company under United Kingdom Company Law. Their publically available data for the fiscal year 2018 are given in Table 1.

### 3.1. Case Selection

The current study's context is based on multiple case studies. Internationally there is BIG Four; but due to some internal disputes and politics of Deloitte Yousuf Adil since last five years, currently it is not considered as one of the big four firms. Instead there is in only Big 3 in Pakistan as of now. So the study has considered top three firms named (local Names), A. F. Ferguson & Co, Ernst & Young Ford Rhodes Sidat Hyder and KPMG Taseer Hadi & Co.

EY's advisory department is considered the best in Pakistan, it has expanded significantly in last few years. For the purpose of this study Advisory department of the EY has been selected. In KPMG the Audit & Assurance department is the most experienced and revenue generating department. PWC Pakistan has a combined department of Assurance & Advisory offering so many services of diverse nature, so this department has been select for the purpose of this study. Although PWC is the market leader in ERP related services Assurance & Advisory has more enriched knowledge and experience. In this study, we have used global names of firms instead of local Pakistani names.

For the purpose of the study primary and secondary data was collected; the data was collected in natural social settings. Secondary data was mainly collected from the previous research work available on the internet. For primary data collection 5 respondents were selected from each firm, all were CA/ACCA qualified and experience ranged from 4.5 years to 11.5 years at the time of interview. So the unit of analysis was a person working at managerial level in the firm with at least 4.5 years of experience. First five interviews were conducted from the Advisory department of EY, and all were at the post of Manager. Next five interviews were conducted from Audit and Assurance department of KPMG; 3 of those respondents were Assistant Managers, 1 was a Deputy Manager and 1 was a Manager. Last five interviews were conducted

from Assurance & Advisory department of PWC; 4 were Assistant Managers and 1 was a Manager.

All interviews were conducted in the respective firms. Interviews were recorded and detailed notes were also taken; so that nothing could skip due to any distortion while recording. Interview recording ranged from 11 minutes to 35 minutes, with an average time of 20 minutes per respondent. Additional material like presentation slides, organogram, flow charts and documents like Training Regulations and Guidelines 2015, ICAP Ordinance 1961, firms profile/resumes were taken during interviews. Some other relevant information from the web sites of firms and their regulatory bodies were also taken. Furthermore, observation was used for data triangulation (Yin, 2013) which helped to achieve reliability of the data. In addition to this, asking the same questions from different people helped to validate the information. Later on this pattern helped in building argument. Semi structured interviews were conducted and 16 open ended questions were asked from all respondents. The questions were designed after literature review.

#### **4. Analysis and Discussion**

It has been observed during the data collection that every respondent has emphasized on the understanding of clients' requirements. It is easier when the clients exactly know their requirements but it becomes difficult to pursue such clients when they are not sure which service could possibly resolve their problem. Literature has strongly emphasized that the service design should be based on the clients' needs, (Golik Klanac, 2012; Ulkuniemi, et al., 2011) it is not something which could be done in isolation, input form of the client is integral part of this process (Olson, et al., 1998). The service design perspective contends that the value can't be created solely by the firm but it is created with the help of interaction between the client and service provider (Busagara, et al., 2019).

Once the clients' requirements are clear to the firm, it is important to identify what are the primary needs of the client to be focused and what the secondary needs to be fulfilled are (Secomandi & Snelders, 2011)?\_GPSFs run under the regulations of number local regulatory bodies including, ICAP, SECP, FBR, ICMA and International bodies like ACCA, PIPFA, ICAEW, CFE, CISA, CIMA, IFAC, IASC, IASB, IAASB. These GPSFs can't offer any service which is against the policies of regulatory bodies (Belal, Spence, Carter, & Zhu, 2017). Furthermore, these firms have to follow ICAP Ordinance 1961 in Pakistan, which clearly states the 'acceptance mechanism' for new clients (ICAP, 2018). Rules and regulations for the GPSFs are strict than any other service provider. All respondents categorically said that the firms have to complete risk assessment process, as they can't accept any client who could hurt their goodwill in the market. A strong emphasize was given by the respondents, but no such material was found in

the literature. It could be due the uniqueness of the services offered by the GPSFs or/ and lack of published research material on this segment of the service sector. Before moving towards the next stage of the framework, firm has to decide whether there is a need to design a new service or redesign an existing service will serve the required purpose; every component of the service must be taken into consideration (Goldstein, et al., 2002).

Stage 2 starts with the firm's assess of its competencies and capabilities, and the same was referred by (Ulkuniemi, et al., 2011). The firm should accept the client only if the firm has required competences, otherwise the firm should arrange those required skills from a third party. Third party arrangements have been observed in many of the engagements of GPSFs (Oshri, Arkhipova, & Vaia, 2018). Third parties and experts in the fields can be hired to fill the gap and it is important to train and develop own resource for future engagements. Once the core or primary services are identified, next step is to identify & support services (Secomandi & Snelders, 2011). The same thing has been observed in firms' working environment, where firms identify and plan the same in advance. In most of the cases clients request for the support services during the execution of the core services or at the end of the core services.

(McManus & Hutchinson, 1996) have highlighted the importance of developing supervisory control system. It was also observed that a multilayered hierarchy exists in almost every GPSFs, which is referred as quality assurance/control system by GPSFs. It makes the supervisory control system very strict to ensure everything is filtered adequately before delivering the same to the client. Additionally, development of own human resources and training them for the future was also mentioned by a few respondents, and they also highlighted its importance for firm's performance (Giannakis, 2011) (Sriviboon & Jermsittiparsert, 2019) . Human resource allocation and scheduling is one of the most difficult and hectic task for any manager (Becker, Steenweg, & Werners, 2019) . It is directly linked with the individuals' set of skills and nature of the assignments firm is dealing with (Giannakis, 2011).

The whole work plan to deliver the service is known as methodology in GPSFs' environment. Respondent emphasized that it is very important to share it at every milestone especially before starting service delivery, just to make sure there is no perception gap between engagement team and the management of the client. The methodology is being designed taking in to consideration the established IDDDS methodology, as referred by few respondents of EY. The said methodology consists of five steps namely as Identify, Diagnose, Design, Delivers and Sustain.

Management's commitment to provide service quality is very crucial (Fernandes & Fernandes, 2018). If the firm's top management is committed to provide quality oriented service only then the engagement teams can actually deliver the quality service to the clients to fulfill their



requirements. In this regards, the concept of ‘quality function deployment’ has been introduced by (Ulkuniemi, et al., 2011) and included in the proposed framework. Once everything is planned and agreed with the client, the engagement team delivers the services once the engagement letter is signed.

Numbers of studies have been conducted highlighting the importance of feedback and its role to deliver in organizations’ performance (Burgers, Eden, van Engelenburg, & Buningh, 2015; Gregory & Levy, 2015; Shiraishi, Ito, Kawaguchi, & Sagawa, 2015) (Kovačević, Bojčevski, & Krasavac, 2017) , this is the reason for the proposed framework to be on same area. It has been observed in data collection that GPSFs don’t show serious interest in feedback collection and evaluation, although there is a formal procedure to conduct the feedback at the end of every engagement. All feedbacks must be collected from every client and should be evaluated by the top management (Jug, Jiang, & Bean, 2019). The good thing that was observed in the firms is that country partner review the report of all the available feedback forms. Lastly, review of the service delivered should be carried out, to assess whether the same sets of processes and tools can serve this service in the future or some changes would be required for quality oriented service delivery.

#### 4.1. Proposed Framework

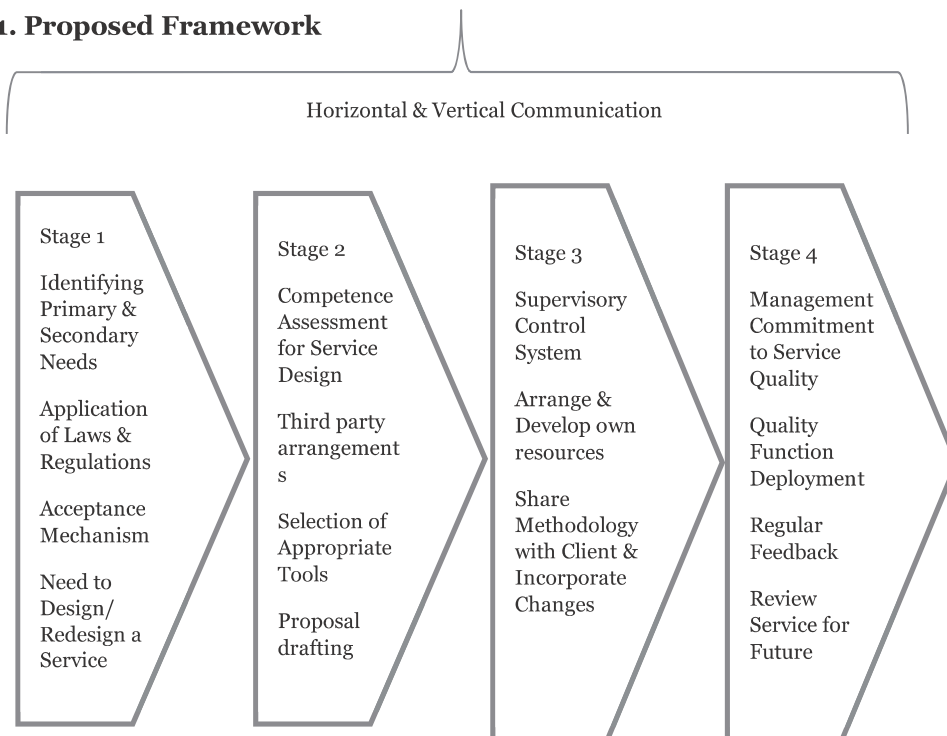


Figure 01: Proposed Framework for Global Professional Service Firms

Following framework can be very useful for all GPSFs offering similar services, as it will provide them a guide line to design their services in optimal way. The service design mechanism in Big Four is observed much more systematic than the rest of the succeeding firms. That is why the framework is developed after studying the available literature and conducting interviews from top 3 firms. Currently, a total of 438 sole proprietors and 164 partnership firms are registered in Pakistan by ICAP who are offering previously discussed services (ICAP, 2018). Out of these 602 firms only 123 firms are QCR rated (Wasti, 2019) and rest of the firms keep on trying to get QCR ranking. The proposed framework will be a major help for those 476 firms who always struggle to pass their periodic quality control review. Furthermore the GPSFs are considered as transnational (Boussebaa, 2015) so the proposed framework will be equally beneficial for all local and global professional service firms.

## **5. Conclusion**

To remain competitive in the market a GPSF should be committed to give utmost importance to service design process. Companies should be willing to invest in this process otherwise a lot of resources could be wasted (Saco & Goncalves, 2008). The proposed service design framework for the supply chains of GPSFs could be used by service designers and practitioners. The development of service design frameworks and metrics is in evolutionary stage. In the previous models lack of practical perspective has been observed; the proposed framework could help service designers and practitioners to design their service in a better way. Furthermore, they can also develop their own industry specific frameworks by making some amendments in the proposed framework (Giannakis, 2011).

It is important for service designers to remember while taking inspiration from systematic approach for designing in the manufacturing sector, that conditions and tools used in the those manufacturing industries cannot be applied as it is in the service sector like consultancy, health care and education, etc.(Gummesson, 1990). Another important element to be considered while designing a service is to keep the design open ended to accommodate improvements for industry specific requirements (Saco & Goncalves, 2008). Expectations gap is one of the most critical issues in the service design, mentioned by many respondents. To minimize this gap properly and timely, communication with the engagement team and client is very important. Engagement team should communicate the complete methodology to the client including what will be the outcome, deliverables and how it will be done. It really helps to improve the quality of the service delivered (Gummesson, 1990). Lastly, the servuction process is completed with the interaction of engagement team and client's staff, both could have entirely different skills, and personality traits (Gummesson, 1990). It has been observed in the literature that their successful interaction leads towards the successful delivery of the service, so training of firm's staff is very important to deal with the issue.

This study has focused three top chartered accountant firms of Pakistan; these firms are very much matured and have a rich knowledge bank because of international affiliation. Our proposed framework has been developed by considering not only the available literature but it also incorporates acknowledgements from the managers and supervisors that, service design is integrated with their organizational practices. A carefully planned service design can play a vital role in new service development and reshaping existing services.

Future studies can be conducted on other small firms working in the same segment of the service sector. How they design/plan their services and how this framework can help them in developing better service design. Very limited work has been found in literature regarding GPSFs services design. The framework can be referred in other service industries like, financial institutions, law chambers, educational institutes and training firms.

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