A SERVICE DESIGN FRAMEWORK: A MULTIPLE CASE STUDY FOR THE SUPPLY CHAINS OF GLOBAL PROFESSIONAL SERVICE FIRMS

KHAWAJA AYAZ AHMAD[1], ASHER RAMISH[2], KHALIQ UR REHMAN[3]

ABSTRACT

The purpose of this study is to develop a framework for service design in the internal supply chains of global professional service firms. 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 global professional service firms. There exist series of steps to design and deliver the service and they 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 need and organizational practices while keeping in view the requirements from the regulatory bodies. The study provides a platform for new research 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 all other 123 Quality Control Review (QCR) rated and 476 non QCR rated firms registered by Institute of Chartered Accountants of Pakistan (ICAP). This study will add value in literature as no generalized supply chain model of this industry can be found in literature.

Keywords: Service Design, Service Supply Chain, Global Professional Service Firms (GPSFs) Accountancy Firms, Framework, Multiple Case Study and Supply Chain
JEL Codes: D20

I. 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 services sector and numbers support the facts very clearly. 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 received attentions from the academic sector. In the last decade a lot of research has done in the service supply chain. Regardless of the service sector contribution to the world's economies, services sector is far behind in performance and excellence. 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). The service supply chain can be defined as an interlinked system of suppliers, professional service providers, clients, related third parties and all other members of the network who give their input in form of service or resources to deliver ultimate service to the client (Boon-itt & Pongpanarat, 2011). Service design is a human centered and interactive approach (Busagara, Mossberg, Jani, Anderson, & Mori, 2019) and that is why is 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). Manufacturing concerns prefer to use standardize parts instead of customized parts for improved and convenient product design. In the same way, service organizations prefer to simplify the whole process of service design to service delivery, by improving their process at every stage. It helps to achieve quality-oriented service delivery with minimum variations. Furthermore, the key

---

[1] Lahore Business School, University of Lahore, Pakistan
[2] Hasan Murad School of Management, University of Management & Technology, Pakistan
[3]Corresponding Author: Office of Research Innovation and Commercialization, University of Management & Technology, Pakistan
Email: khaliqcheema@gmail.com

----

elements of service design identified by previous researches includes vendors of the firm, all major facilities, relevant tools, equipment and technology and process to design and deliver the ultimate service (Ding, 2015). Literature has been found with respect to service design in hospitals, healthcare, food industry, transportation, distribution and entertainment industries, 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 the GPSFs are designed in a transnational environment (Greenwood, Morris, Fairclough, & Boussebaa, 2010) 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. GPSFs firms provide all such kind of professional and financial services. Organizations providing financial services are the key contributors in the service sector (Silvestro & Lustrato, 2014), so focusing on their supply chain can help to enhance their output as well as global economy. A shortfall of literature has been observed that how service design can help to bring together organizational processes and practices and how it can contribute in developing new services (Yu & Sangiorgi, 2018). The current study has targeted top three GPSFs working in Pakistan. 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.

II. 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 compare 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 participate 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 designing and redesigning which ultimately leads towards better service design (Ulkuniemi et al., 2011). Majority of manufacturing industries account far very complex process of manufacturing and then a long list of quality checks is marked just before the delivery of the finished goods to the end consumer. Even though, complexity of the services sector is more than the manufacturing sector. It is most difficult, firstly, to understand what exactly a client perceives about a service and then delivering exactly the same thing (Golik Klanac, 2012).

Higher customer satisfaction represents effectiveness of the service being offered and which can be further evaluated by the "service speed, time, quality and human interaction". In simple words, effectiveness is achieved when things are done right and the results generate value for the customers (Karwan & Markland, 2006). According to Tsai (2014) it is not as easy to follow the punch line of 'efficiency and effectiveness' for service providing organizations. Numbers of decisions are required to be made at every stage of a service from idea to delivery. Many times such decisions lead towards the change of current stage with no or some impact on previous stages and sometimes it entirely reshape the idea of service to be offered. This process of reshaping is a continuous process in most of the service proving organizations, especially organizations working on the spirit of learning organizations (Tsai, 2014). Such committed organizations keep on investing for the improvement of physical infrastructure, information and material flows, and developing new skills (hard skills and soft skills) among employees. Taking such decisions which would prove correct in future is really a challenge for the management, and such correct decisions should be consistent and customer focused (Goldstein et al., 2002). Karwan and Markland (2006) referred that services must be delivered in such an effective way, which must meet customer's expectations and requirements. Some other old researchers also highlighted importance and impact of productivity of the service being provided. Contrary to this, Karwan and Markland (2006) argued that even after spending allot of time and finances, this field never met its long term objectives in respective of "productivity" and "effectiveness".

Quality oriented research work can't be done on the area of service design before understanding its multidisciplinary nature. Hill et al. (2002) emphasized that number of frameworks will be required to handle the inherent complexity of the service design, he has discussed four major areas of service design (Hill et al., 2002). 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 supply chain management measures (Tseng et al., 2018). Looking from global perspective, contribution of services 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 services suppliers to export (Ahmed & Ahsan, 2011). The services sector contributes around 60 percent in Pakistan's economy. According to the Pakistan Economic Survey 2018-19, growth rate of services sector was observed 4.7 percent with the highest employment ratio, i.e. 37.6%, as compare to manufacturing, construction and agriculture. Such numbers indicate influencing role of this sector (Wasti, 2019).

II.I. 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; Kassem et al., 2019; Sajid and Ali, 2018). Boon-itt and Pongpanarat (2011) referred service supply chain management as a tool which is used to forecast, plan, implement, and control the whole cycle of the supply chain to efficiently meet the clients' requirements. Communication of information and cash flows among the members of a supply chain is also part of it. Focus of previous studies were to enhance efficiency of operations as well as reduction in related costs. In the recent past, companies are now more customers focused to gain competitive advantage.
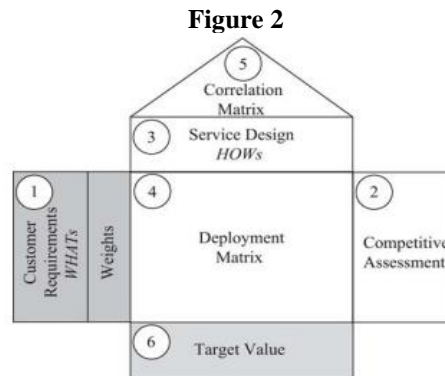
II.II. SERVICE DESIGN

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 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's most important at planning stage that how the organization perceives and defines their own definition of Service they offer (Goldstein et al., 2002). The design must be comprehensive from two major perspectives. First the customers' perspective, it must keep the focus on what is actually required by the customers. Second, the company's perspective, it must organized all steps together that the service is technically as well as financially feasible, which could ultimately lead the organization towards competitive advantage (Gummesson, 1990). Literature has emphasized four major areas which must be considered at the start of service design stage. **'Culture':** create a customer oriented culture. **'Talent':** hire self-motivated people. **'Development':** Continues training and development '**Measure and reward':** a systematic mechanism for performance evaluation and reward distribution. (Saco & Goncalves, 2008). Proper planning for the design stage must be done, because it's the service design which sets direction for the new service and mostly sets fate of the service as well. Being proactive at the service design stage the service designer can minimize the chances of bugs and errors in the system, otherwise, at the later stages the inappropriate service design is fault of the designer and categorically it's the fault of the management who gave green signal to the service design. (Karwan & Markland, 2006).

II.III. SERVICE DESIGN TOOLS & TECHNIQUES

Gummesson (1990) has referred couple of technique; the first one is known as "service blueprinting", second one is SOS (Strategy and Organization for Service), also known as quality tree. Third one was originally proposed for the "knowledge based organization". Initial work on service design was done using the classic tools of product design. Ulkuniemi et al. (2011) has referred 'service blueprint' as one of the best service specific tools. The service blueprinting technique is quite similar to developing process flow charts is sort of flow chats. This technique connects everything involved in the process of servuction while making a flow and sequence of them, so that nothing could be left behind. SOS or the quality trees technique mainly starts from the brain storming sessions and focus groups try to identify key elements effecting service quality. Based on those discussions special software generates overall structure of the tree. After that, each element of the tree is evaluated with reference to its impact on quality and organization's strength to accomplish those tasks. Lastly, a final copy of the tree structure is generated demonstrating the quality tree itself and influence of critical factors. Finally, the third technique deals with the different components used in "knowledge based organization". Any decision regarding the quality of the component deals with the depth and breadth of service begin offered (Gummesson, 1990). Ulkuniemi et al. (2011) has referred some other techniques named 'structured analysis and design technique', 'fault tree analyses' and 'lean service tools'; all were focused to help in better service design, improve quality of the service and reduce related costs.

Quality Function Deployment (QFD) is another famous tool from the manufacturing industry used in services industry to design its process and managing service quality (Ashrafuzzaman, Al-Maruf, Mahbubul, Malek, &

Mukaddes, 2016). House of Quality (HOQ) is one the major technique of the QFD, its helps to understand clients need and plan a comprehensive delivery mechanism for that. HOQ is consist of six step: first identify clients need and evaluate its weight, then check competitive assessment with the services, convert client needs in the form of service design, then develop a relationship matrix of information from step 1 and 3, then identify the relationship in the characteristics of different service designs and in the last stage set target vales of every characteristics of the service (Ulkuniemi et al., 2011). The model mentioned in **Figure 2** is called '**House of Quality**'.

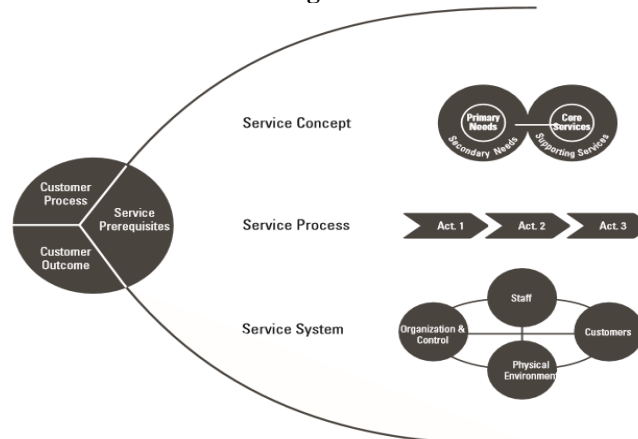**Figure 2**

Source: Ulkuniemi et al. (2011)

Table 1

Service Design Tools	
Service Design Activity	**Tools (sample)**
Understanding (assessing)	Benchmarking Critical incident technique Ecology map Ethnographical studies Shadowing Trend scouting
Thinking (framing)	Affinity diagram Fishbone diagram Touchpoints analysis
Generating (exploring)	Body-storming Randomizer Unfocus group
Filtering (reducing)	Heuristic evaluation Personas Pluralistic walkthrough
Explaining (rationalizing)	Experience prototyping Metaphors Social network mapping
Realizing (building)	Blueprint Role script

There is long list of tools used in service design, drawn from different fields, but their application depends on the clients' requirements, nature of the service, and availability of resource and sometimes likeliness of the designer. Many frameworks have been found in literature but no consensus has developed on one framework. It can be just because of the diversification and uniqueness of services sector. Service design is basically multi-disciplinary, and highly dependent on the sense of the designer; that how he understands the client's requirement, time constraints, environment, economic, tools selection and practicability. Service design is more an art than science. Service design activities along with their suitable tools have been mentioned below in **Table 1** (Saco & Goncalves, 2008). Secomandi and Snelders (2011) have referred another framework to develop new service which includes details of service prerequisites. According to him, the construct of service includes three elements mentioned on the left side of the below diagram. Furthermore service concept has interlinked the primary need of the clients and core services delivered to the client, it also includes secondary needs and support services (Secomandi & Snelders, 2011). The framework is mentioned in **Figure 3**.

Very limited research has been done in the area of services supply chain management. Service providers are struggling to improve their process and to reduce direct/indirect costs while keeping the client satisfied. Furthermore, advancement in IT has increased that competition and client's expectations. There is no way out,

----

except to invest in service and process design. It is further believed that service sector can flourish by applying some of the manufacturing related tools and techniques. And there exist a need to design service specific measurement tools and scales, but very limited research has been found in the literature (Boon-itt & Pongpanarat, 2011). Organizational preference should be considered over individual preferences on using tools and techniques while designing a service to be offered. It is good to account for that what kind of tools and techniques these people have who are actually working on service design; but it's more important to remember why these organizations have employed all these skilled individuals and how these organizations should bring together to process the idea of service design. Furthermore, service design is mostly considered as "science" whereas it's practically an art work with certain uniqueness in it every time, but this art work must be done with the spirit of developing hypothesis and experimenting something new (Roy, Shehab, Tiwari, & Morelli, 2009; Saco & Goncalves, 2008). Another supply chain reference framework has been referred by the Giannakis (2011), the framework was specially designed for a consultancy supply chain, the framework is given in **Figure 4.**

Figure 3

Source: Secomandi and Snelders (2011)

Figure 4
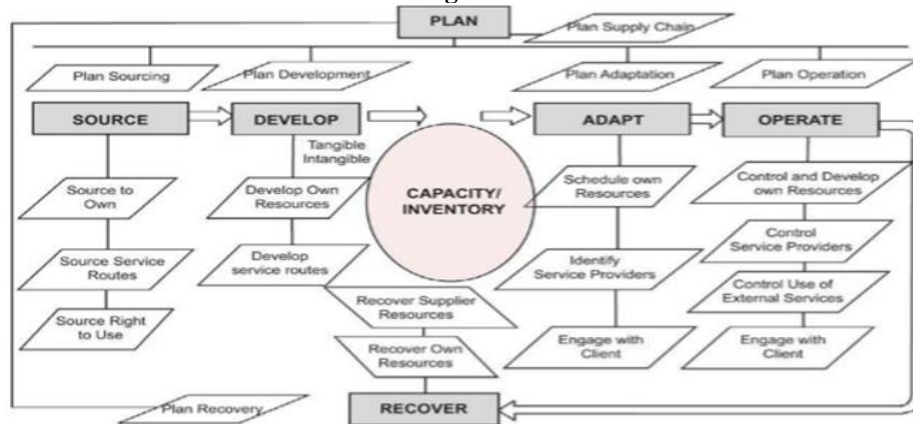
Source: Giannakis (2011)

Some of the attributes of this model can be very help full after the Service Categorization stage of the proposed model. Service and manufacturing are two different phenomena but practitioners and experts have been seen applying tools and techniques in the services sector developed for a manufacturing environment. Services sector require such tools and techniques which are fundamentally based on the concept of "service science" (Saco & Goncalves, 2008). All these approaches are good but not sufficient to cater the diversity of the nature of the services offered around the globe. It is important to develop new techniques as well as drive from existing technique used in manufacturing sector (Gummesson, 1990). Every service is unique in nature, so adopting the appropriate service design approach and selection of relevant tools and techniques for the particular service is very important. In the past many yeas trainings have been conducted to involve people in the design stage but confusion still exists for the selection of right tools, methods and techniques for a certain service design (Sanders, Brandt, & Binder, 2010).

II.IV. SERVICE DESIGN STRATEGY
Service design is based on the client need, whereas the strategy is relies in the consequences of the service for the clients, means nature of the service (Golik Klanac, 2012). As it's important at planning stage that how organization

----

perceives and defines the service they offer, it is also important for service providers to know that how customers perceive their service. Perception can be based on the previous experience, some online information, word of mouth or the information provided by the current or other service providers. Regardless, the customer perceives it as a series of interlinked process or one single "package". The service must be delivered as flawless, to be perceived correct and according to the requirements of the customers (Goldstein et al., 2002). Service design stage cannot be completed in an isolated environment, without the input from other departments especially form the client. Inputs from R&D, finance, operations, marketing and customer service must be incorporated, or at least must be considered during the process. It will help to narrow down the actual target market, prices to be offer and other related features. Gummesson (1990) concluded that a service design strategy should include systematic approach. Olson, Cooper, and Slater (1998) proposed step vise strategy; firstly, that it should be aligned with supply chain / organizational strategy. Understanding customer requirements comes at second and pricing at step three. Lastly, the service provider should take decision of resource allocation and assigning job to relevant person (Olson et al., 1998).

III. THEORETICAL SUPPORT

Extension theory helps to bring everything relating to creative ideas, innovation, knowledge, design ideas, strategies, etc. on the paper in a formalized manner. This theory has helped a lot in many fields especially management science, other than this it has supported in information technology, engineering, computer sciences, artificial intelligence, decision processes and related control mechanisms (Cai, 1999). Activity theory is another theory observed in the literature referred with the service design. The whole interaction in 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 et al., 2009). Game theory also has been linked with service design in the literature. In the game theory both players are assumed to play their respective roles consider that the other partner will play his/her role. Equilibrium can be gain, when both players know the strategies used by each other, instead of just creating equilibrium both players should select such strategies which could maximize ultimate utilities (Brandenburger & Dekel, 1987). 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). Other than these theories, multiple other theories has been referred in literature in respect of service design including system dynamics, balanced score card (BSC) and complex network theory (Zhang & Chen, 2015) Theory of swift, even flow (Karwan & Markland, 2006), and Unified Services Theory (Secomandi & Snelders, 2011).

IV. METHODOLOGY

To deal with a qualitative research there are four types of available research design named: Phenomenology, Ethnography, Grounded Theory and Case Study. An inductive multiple case study approach has been used in this study, originally proposed by the Yin (2013). This approach helps to answer the how and why nature of questions. Furthermore, this approach is more suitable for the industry like GPSFs of which no significant literature was found. Multiple case study method helps to build theory and drive replication logic (Golik Klanac, 2012). Fifteen percent of the papers relating to topic of service supply chain published during the period of 2000 to 2014 have used case study approach as the research methodology (Zhang & Chen, 2015). Research strategy for the study is inductive and non-experimental. Mater is exploratory in nature which has certain contextual information; furthermore, reality is not there it will be defined by the researcher as per the context and as per the experience. The ontology of the interpretive approach is relativism, which means that reality is subjective in nature and it varies from individual to individual. Every person perceives things differently and our perception is influenced by our senses (Scotland, 2012). Interpretive paradigm has evolved in the last 50 years; it has helped allot to eliminate the constraints of positivist approach. It is a qualitative approach just like phenomenology, hermeneutics and ethnography, containing such qualitative methodological approaches as phenomenology which is influenced by subjective reality, culture and history. It relies on the objectivity of the researcher, his passive data collection and expert interpretation of the data. 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 the "what" and "How" kind of questions (Yin, 2013). A total of 438 sole proprietor and 164 partnership firms are registered in Pakistan by ICAP (ICAP, 2018). Out of these 602 firms only 123 firms and QCR rated (Wasti, 2019)and we have selected 3 of them. 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 is given below in **Table 2**.

Table 2

Name of Firm	Local Name	Revenues (Billion US$)	Employees	Revenue per employee	Headquarter	Source
Price water house 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	34.8	260,000	$133,846	United Kingdom	(EY, 2018)
KPMG	KPMG Taseer Hadi & Co	28.96	207,050	$139,870	Netherlands	(KPMG, 2018)

IV.I. 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 firm. 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, so for the purpose of the study Audit & Assurance department has been selected. 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 but Assurance & Advisory has more enriched knowledge and experience. In this study we have use the global names of the 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 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 Manager, 1 was Deputy Manager and 1 was Manager. Last five interviews were conducted from Assurance & Advisory department of PWC; 4 were Assistant Manager and 1 was 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 minute to 35 minute, 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 use for data triangulation (Yin, 2013). In addition to this, asking the same questions from different people helps to validate the information. Semi structured interviews were conducted and 16 open ended questions were asked from all respondents. The questions were designed after literature review.

V. ANALYSIS

It has been observed during the data collection that every respondent has emphasized on the understanding 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 client's needs, (Golik Klanac, 2012; Ulkuniemi et al., 2011) it is not something which could be done in isolation, input form 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 primary needs of clients to be focused and what the secondary needs to be fulfilled are? GPSFs are run under the regulations of, previously mentioned,

----

number of regulatory bodies and they can't offer any service which is against the policies of regulatory bodies. Furthermore, these firms have to follow ICAP Ordinance 1961 in Pakistan, which clearly states the 'acceptance mechanism' for new clients. 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 on the last three point 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 research published 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 redesigning an existing service will serve the required purpose.

Few respondents has mentioned that it is important to assess firms competencies and capabilities, and the same was referred by the 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. Third party arrangements have been observed in many of the engagements of GPSFs. Third parties and experts in the fields can be hired to fill the gap. It is important to train and develop own resource for future engagements. After that identification of core or primary services next thing is to identify & support services (Secomandi & Snelders, 2011). The same thing has been observed in firms' working environment, where firm identify them and plan in advance. In most of the cases client asks for the support service during the execution of the core service or at the end of the core service.
Next step of this stage is selection of personnel, responsible to design and implement service, it also include engagement team formation (McManus & Hutchinson, 1996) and human resource allocation. All respondents were agreed that team formation is based on relevant skills and experiences. After the team formation selection of appropriate tools is very important (Gummesson, 1990). Numbers of tools have been referred in the literature; tool selection is entirely depends on its availability and designer's discretion. Proposal drafting is another very critical variable, mentioned by all respondents and included in the second stage of the proposed framework. Its purpose is to agree with the client that what will be delivered by the firm and how it will be delivered. McManus and Hutchinson (1996) have highlighted the importance of developing supervisory control system. It was also observed in the firms' working environment that a multilayered hierarchy exists in almost every GPSFs, given in the Annexure B1. It makes the supervisory control system very strict to make sure everything is filtered properly before delivering to the client. Additionally, development of own human resource and train them for the future was mentioned by few respondent, and they also highlighted its role in firms' performance (Giannakis, 2011). Human resource allocation and scheduling is one of the most difficult and hectic task for any manger/ team leader in firms' environment. It is directly link 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 stage 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 should be designed using the IDDDS methodology technique, as referred by few respondents of EY. This methodology is consists of five steps including 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 should deliver the services after getting signature on the engagement letter. 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), the reason why proposed framework has emphasized on same area. It has been observed in data gathering that firms don't show some serious interest in feedback collection, although there is formal procedure to conduct the feedback at the end of every engagement. All feedback must be collected from every client and should be evaluated. The good things which was observe in the firms that country partner review the report of all the available feedback forms. Lastly, review of the service delivered should be done, keeping in the view that either the same sets of process and tools can serve this service in the future or some change is required for quality oriented service delivery.

VI. PROPOSED FRAMEWORK
The framework has been divided into four stages. The first parameter is 'understanding the client's need', which was mentioned by all the respondents and supported by literature as well. Everything in service design is based on the better understanding of client's need. After understanding the needs it is important to categories that what are primary needs of clients and what the secondary needs to be fulfilled are? After that it is very important to review all applicable local and international standards, laws and regulations. As the GPSFs are run under the

----

regulations of previously mentioned number of regulatory bodies so they can't offer any service which is in contradiction of the defined rules of the regulatory bodies. The next step is 'acceptance mechanism' mentioned by almost all respondents, which includes assessment of the client and nature of job either the firm can offer that service to the client or not. Once the acceptance mechanism is completed, firm have to assess risk regarding client. To make sure that the clients' operations are not risky in nature, neither they are involved in any kind of illegal or immoral activities. Once all these activities are done, the last step of the stage one is deciding whether the firm has to design a new service to fulfill client's need or redesign an existing one.

The first step of the second stage is competence assessment for service design, meaning that either the firm is competent enough to design the required service; this step is derived from the discussions with the respondents and supported by the literature as well. Once the firm decides that the required competences are available, they can more directly to third step. On the other hand, if not and firm does not has those competencies and still willing to entertain the clients, the firm can do it through third party arrangements. The third parties, expert of the respective field, can help to deliver the required services. The third step of this stage was proposed by the respondents and supported by the literature, that the service provider should identify the core services required to fulfill clients need and identify what are the secondary services which clients or firm perceives should be delivered with the primary services. For example, after the ERP implementation the client ask for the ERP training service or ERP maintenance service. Next step of this stage is selection of personnel, responsible to design and implement service, it also include engagement team formation and human resource allocation. After that selection of appropriate tools, supported by literature, for service design is important element. Numbers of tools have been referred in the literature; they can be used depending upon the nature of the service and preference of the service designer. Last step of the second stage is proposal drafting, to agree with the client what will be delivered by the firm. It is very important and compulsory step of any services offered by any GPSF, and same thing was agreed by all respondents and observed in the practice. Third stage of the framework starts with developing supervisory control system, as observed in the firms' working environment and supported by the literature as well. A multilayered hierarchy exists in almost every GPSF, except a few small firms with few numbers of employees. The multilayered hierarchy makes the supervisory control system very strict to make sure everything is filtered properly before delivering to the client. At this stage it is important for the firm to arrange permanent staff to enhance its knowledge and expertise areas. Furthermore, training and develop of existing staff member is also very important.

It was agreed that scheduling of all resources especially human resource is very critical in the GPSFs' environment. Lastly at this stage, share the complete methodology with client & incorporate proposed changes. The methodology should be designed using the IDDDS methodology technique, as referred by few respondents of EY. This methodology is consists of five steps including Identify, Diagnose, Design, Delivers and Sustain; explained in the data analysis part. First step of the fourth stage is to make sure management's commitment to provide service quality. This variable of the framework is supported by the literature and strong recommendation was made by all respondents. Because, only if the firm's top management is committed to provide quality oriented service only then the firm can actually deliver the quality service to the clients to fulfill their requirements. Second step is to deliver the services agreed to the client in the proposal. It is important to conduct feedback, as emphasized by the literature, and there is a regular practice to conduct feedback form at the end of every engagement. But, it was mentioned by many respondents that they just send the feedback to the client and its collection from the client is not their responsibility.

Where the feedback mechanism is important for quality improvement, its regular review and the evaluation is equally important. If the feedback is conduct and not properly evaluated by the top management, then it does not serve its purpose and just a waste of time and resources. A practice of regular evaluations of all feedbacks by the country partner has been observed in the GPSFs. In the end, review the delivered service from future's perspective; either it can be delivered in the same way or with some improvements. During all these stages it is highly recommended to keep a strong horizontal and vertical communication system to keep things moving within engagement team and with the client's staff.

Horizontal & Vertical Communication

Stage 1

Understanding Customer's Requirements

Identifying Primary & Secondary Needs

Application of Laws & Regulations

Acceptance Mechanism

Risk Assessment

Need to Design/ Redesign a Service

Stage 2

Competence Assessment for Service Design

Third party arrangements

Identifying Core & Support Services

Personnel Selection

Selection of Appropriate Tools

Proposal drafting

Stage 3

Supervisory Control System

Arrange & Develop own resources

Schedule own resources

Share Methodology with Client & Incorporate Changes

Stage 4

Management Commitment to Service Quality

Quality Function Deployment

Deliver Agreed Service

Regular Feedback

Review & Evaluate the Feedback

Review Service for Future

VII. CONCLUSION

To remain competitive in the market a firm 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 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 to remember for service designers while taking inspiration from systematic approach for design in the manufacturing sector, that conditions and tools used in the those manufacturing industries cannot be applied as it as in the services 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 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 proper and timely communicating to engagement team and client is very important. The engagement team should communicate 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 exposure. Our proposed framework is developed based not only on regular practices of designers but it also incorporate 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. This framework can be very helpful for all other firms working in the same sector. Future studies can be conducted on other small firms working in the same segment of the service sector. How they are design/plan their services and how this framework can help them in better service design. Very limited work has been found in literature regarding financial services design. The framework can be in other services industries like, financial institutions, law chambers, educational institutes and training firms.

REFERENCES

Ahmed, A., & Ahsan, H. (2011). Contribution of services sector in the economy of Pakistan. *Working Papers & Research Reports, 2011.*

Ashrafuzzaman, M., Al-Maruf, A., Mahbubul, I., Malek, A. A., & Mukaddes, A. (2016). Quality function deployment approach to measure supply chain performance: a case study on garments accessories industries. *International Journal of Industrial and Systems Engineering, 22*(1), 96-120.

Boon-itt, S., & Pongpanarat, C. (2011). Measuring service supply chain management processes: The application of the Q-sort technique. *International Journal of Innovation, Management and Technology, 2*(3), 217.

Brandenburger, A., & Dekel, E. (1987). Correlated Equilibrium as an Expression of Bayesian Rationality. *Econometrica, 55*, 1391-1402.

Brock, D. M., Leblebici, H., & Muzio, D. (2014). Understanding professionals and their workplaces: The mission of the Journal of Professions and Organization. *Journal of Professions and Organization, 1*, 1-15.

Burgers, C., Eden, A., van Engelenburg, M. D., & Buningh, S. (2015). How feedback boosts motivation and play in a brain-training game. *Computers in Human Behavior, 48*, 94-103.

Busagara, T., Mossberg, L., Jani, D., Anderson, T., & Mori, N. (2019). *Firm-Customer Interactions and New Service Development: Mediation of Customer Post Service Information.* Paper presented at the 2nd International Conference on Tourism Research.

Cai, W. (1999). Extension theory and its application. *Chinese Science Bulletin, 44*(17), 1538-1548.

Deloitte. (2018). Deloitte announces record revenue of US$43.2 billion".

Ding, D. X. (2014). The effect of experience, ownership and focus on productive efficiency: A longitudinal study of US hospitals. *Journal of Operations Management, 32*(1), 1-14.

Ding, X. D. (2015). The impact of service design and process management on clinical quality: An exploration of synergetic effects. *Journal of Operations Management, 36*, 103-114.

EY. (2018). EY reports record global revenues.

Faulconbridge, J., & Muzio, D. (2016). Global professional service firms and the challenge of institutional complexity:'Field relocation'as a response strategy. *Journal of Management Studies, 53*(1), 89-124.

Fernandes, S., & Fernandes, A. A. R. (2018). The mediating effect of service quality and organizational commitment on the effect of management process alignment on higher education performance in Makassar, Indonesia. *Journal of Organizational Change Management, 31*(2), 410-425.

Gebauer, H., & Fleisch, E. (2007). An investigation of the relationship between behavioral processes, motivation, investments in the service business and service revenue. *Industrial Marketing Management, 36*(3), 337-348.

Giannakis, M. (2011). Management of service supply chains with a service-oriented reference model: the case of management consulting. *Supply Chain Management: An International Journal, 16*(5), 346-361.

Goldstein, S. M., Johnston, R., Duffy, J., & Rao, J. (2002). The service concept: the missing link in service design research? *Journal of Operations Management, 20*(2), 121-134.

Golik Klanac, N. (2012). Types of linkages between service characteristics and customer consequences. *European Journal of Marketing, 46*(3/4), 313-330.

Greenwood, R., Morris, T., Fairclough, S., & Boussebaa, M. (2010). The organizational design of transnational professional service firms. *Organizational Dynamics, 39*(2), 173-183.

Gregory, J. B., & Levy, P. E. (2015). *Using feedback in organizational consulting*: American Psychological Association.

Gummesson, E. (1990). Service design. *The TQM Magazine, 2*(2).

Hill, A. V., Collier, D. A., Froehle, C. M., Goodale, J. C., Metters, R. D., & Verma, R. (2002). Research opportunities in service process design. *Journal of Operations Management, 20*(2), 189-202.

ICAP. (2018). List of Chartered Accountants Firms.

Karmarkar, U. S., & Apte, U. M. (2007). Operations management in the information economy: Information products, processes, and chains. *Journal of Operations Management, 25*(2), 438-453.

Kassem, M. Ali, A. & Audi, M. (2019). Unemployment Rate, Population Density and Crime Rate in Punjab (Pakistan): An Empirical Analysis. *Bulletin of Business and Economics (BBE), 8*(2), 92-104.

Karwan, K. R., & Markland, R. E. (2006). Integrating service design principles and information technology to improve delivery and productivity in public sector operations: The case of the South Carolina DMV. *Journal of Operations Management, 24*(4), 347-362.

KPMG. (2018). 2018 KPMG Global Review.

McManus, J. J., & Hutchinson, I. (1996). TQM in service design. *Managing Service Quality: An International Journal, 6*(1), 40-44.

Muzio, D., Brock, D. M., & Suddaby, R. (2013). Professions and institutional change: Towards an institutionalist sociology of the professions. *Journal of Management Studies, 50*(5), 699-721.

O'Brien, R. (1998). An overview of the methodological approach of action research. *Faculty of Information Studies, University of Toronto*.

Olson, E. M., Cooper, R., & Slater, S. F. (1998). Design strategy and competitive advantage. *Business Horizons, 41*(2), 55-61.

PwC. (2018). "PwC revenues grow by 7% to record US$37.7 billion.

Roy, R., Shehab, E., Tiwari, A., & Morelli, N. (2009). Service as value co-production: reframing the service design process. *Journal of Manufacturing Technology Management, 20*(5), 568-590.

Saco, R. M., & Goncalves, A. P. (2008). Service design: An appraisal. *Design management review, 19*(1), 10.

Sanders, E. B.-N., Brandt, E., & Binder, T. (2010). *A framework for organizing the tools and techniques of participatory design.* Paper presented at the Proceedings of the 11th biennial participatory design conference.

Sajid, A. & Ali, A. (2018). Inclusive Growth and Macroeconomic Situations in South Asia: An Empirical Analysis. *Bulletin of Business and Economics (BBE), 7*(3), 97-109.

Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English Language Teaching, 5*(9), 9.

Secomandi, F., & Snelders, D. (2011). The object of service design. *Design Issues, 27*(3), 20-34.

Shiraishi, N., Ito, S., Kawaguchi, K., & Sagawa, T. (2015). Role of measurement-feedback separation in autonomous Maxwell's demons. *New Journal of Physics, 17*(4), 045012.

Silvestro, R., & Lustrato, P. (2014). Integrating financial and physical supply chains: the role of banks in enabling supply chain integration. *International journal of operations & production management, 34*(3), 298-324.

Song, W., & Sakao, T. (2017). A customization-oriented framework for design of sustainable product/service system. *Journal of Cleaner Production, 140*, 1672-1685.

Spence, C., Dambrin, C., Carter, C., Husillos, J., & Archel, P. (2015). Global ends, local means: Cross-national homogeneity in professional service firms. *Human Relations, 68*(5), 765-788.

Tsai, Y. (2014). Learning organizations, internal marketing, and organizational commitment in hospitals. *BMC health services research, 14*(1), 1.

Tseng, M.-L., Lim, M. K., Wong, W.-P., Chen, Y.-C., & Zhan, Y. (2018). A framework for evaluating the performance of sustainable service supply chain management under uncertainty. *International Journal of Production Economics, 195*, 359-372. *

Ulkuniemi, P., Pekkarinen, S., & Lin, Y. (2011). QFD-based modular logistics service design. *Journal of Business & Industrial Marketing, 26*(5), 344-356.

Vargo, S. L., & Lusch, R. F. (2008). From goods to service (s): Divergences and convergences of logics. *Industrial Marketing Management, 37*(3), 254-259.

Wasti, S. E. (2019). Pakistan Economic Survey 2018-19.

Yin, R. K. (2013). *Case study research: Design and methods*: Sage publications.

Yu, E., & Sangiorgi, D. (2018). Service design as an approach to implement the value cocreation perspective in new service development. *Journal of Service Research, 21*(1), 40-58.

Zhang, R., & Chen, H. (2015). A Review of Service Supply Chain and Future Prospects. *Journal of Service Science and Management, 8*(04), 485.