Introduction

The popularity of co-design in public sector cannot be underestimated judging by its prevalence in several quarters of the realm. However, our understanding of the approach and its efficacy in engendering value co-creation in the public services remains understudied. This paper addresses some of the aspects of the subject matter by using a co-design project to appraise the contribution of co-design in public services. A participant observation was carried to gain first hand information about the contributions of co-design as approach in public services. Based on the emerging findings, co-design could serve as a mechanism for ensuring resource integration. It could also foster reciprocal value creation and serve as an engagement platform for value co-creation in public service systems.

Vargo and Lusch (2004) proposed a conceptual shift from a good dominant logic to a service dominant logic, a user-centric thinking in which the user is more than a passive recipient of service but also a co-producer and a co-creator of value. The logic emphasizes service as the ultimate source of exchange while products and services are vessels through which offerings and propositions are applied for the generation of value (Greer et al. 2016). Since the inception of this logic, scholars have conceptually refined it and redefined the role of the user as a value co-creator and a resource integrator.

There have also been disagreements on how value is created, co-created, what value creation and co-creation means and how service actors perceive value (Hardyman et al., 2015). Service logic scholars (Gronroos and Voima, 2013) theorize that value co-creation is best studied at the micro level where interactions between individuals and firms are observed and conceptualized as the focal point of value co-creation. The service system advocates (Vargo and Lusch, 2015) argue in favor of a macro level co-creation of value where interaction and integration between many actors within a service ecosystem are emphasized. Meanwhile, research on value co-creation in the public sector is on an upward trajectory and scholars are beginning to look at the value co-creation from a public service logic viewpoint (Osborne, 2018).

However, the ascendancy of co-design in the public sector lends an opportunity for public managers and researchers to examine the viable role of co-design in actualizing
value co-creation as a public service paradigm. Recent advocacy for collaborative and participatory forms of service provision have pointed towards the adoption of co-design approaches, which involves the participation of diverse stakeholders in the design process (Sanders and Stappers, 2008). Co-design has its historical roots in participatory design, a popular phenomenon that originated in Northern Europe in the 60s and 70s.

It is pertinent to state that some scholars construe co-design as another moniker for participatory design while others view it as something different. Szebeko and Tan (2010) posit that co-design differs from participatory design because the former emphasizes the specific inclusion of only users in the design process while the latter is an all-encompassing collaboration, which involves all the stakeholders. Sanders and Stappers (2008) opine that co-design is a particular type or instance of co-creation in which trained designers and non-designers are partners in the design activity. The distinction between these two concepts: co-design and participatory design- is still very unclear and needs further illumination, especially in academia.

However, this paper is concerned with co-design and its influence on value co-creation. Despite the increasing popularity of co-design, little is known about its impact in the public sector. The objective is to address this gap by investigating how co-design contributes to the implementation of value co-creation as the centerpiece of public service logic. The next section of this paper details the myriad value co-creation perspectives and the role of co-design in value co-creation. Research methodology and initial findings from a NHS co-design programme are also presented and used to inform the discussion.

**Perspectives on Value and Value Co-creation**

The concept of value remains a polarizing issue in public management (Hardyman et al. 2015). Value can be a microlevel construct where it is individual (or private) value and can be at the macro level where it is collective (or public) value (Meynhardt et al. 2016). The public sector tend to ensure more than just individual value; the provision of public services is also to foster public value (Uppstrom and Lonn, 2015); while the private sector concentrates more on the creation of private value.
The surge in value co-creation research has led to more diverse perspectives on the subject matter. There is a conglomeration of perspectives on value co-creation, which are based on logic of a collaborative value-creating relationship between service-oriented entities. These perspectives emanate from the research and theorization of how and when value is created or co-created between service actors.

Service Marketing Perspective
The service marketing perspective of value co-creation encompasses two research areas- business-to-customer marketing and business-to-business research. This set of researchers focus and theorize on service dominant logic by positing that value is created through interaction. They emphasize the importance of interactive process of integration as the focal point of value co-creation. There are two divides under this perspective- the first school represents the micro-level scholars who argue that value co-creation occurs through direct interaction and only the customer creates value in the customer sphere while the producer’s co-creative role lies in the capacity to offer a proposition (Gronroos and Voima, 2013; Korhonen, 2012; Ballantyne and Varey, 2006). The macro-level group advocates for a system thinking of value co-creation and contend that interacting service systems always jointly creates value. They argue that value co-creation is not usually a dyadic process (firm-customer) but can be among a complex network of actors within an ecosystem (Vargo and Lusch, 2016; Barile et al. 2013; Pinho et al. 2014; Greer et al. 2016). While both agree that interaction is pivotal to value co-creation, they differ in the aspect of the configuration of these interactions and the role of participating actors. The two clusters fail to accentuate the diversity in the perception of value among actors and the possibility of value conflicts. In addition, the value co-creation model by Gronroos and Voima (2013) is one-dimensional and fails to take into account the complexities in service processes and ignores the possible role of third parties in service relationships.

Experiential Marketing Perspective
The value co-creation perspective of this set of scholars is rooted in the experiential marketing stream. They posit that when producers and customers interact to co-create, value lies in the service experiences that occur from such interactions. They emphasize the importance of customer engagement to the realization of value co-creation (Prahalad and Ramaswamy, 2004; Kukk and Leppiman, 2016; Blocker and
Barrios, 2015). This perspective can be grouped into the clusters of experiential marketing, tourism marketing, branding and consumer research (Tyan et al. 2010; Cabiddu et al. 2013; FitzPatrick et al., 2013; Healy and McDonagh, 2013; Cossiosilva et al. 2016). They argue that value lies in the consumption experience of the customer and actor engagement is central to value co-creation (Storbacka et al. 2015; Jaakkola and Alexander, 2014; Luo et al. 2015; Ronndell et al. 2015). The assertion that value lies in consumption experience is customer-dominant and ignores the possibility of the producer also gaining value from the relationship. In other words, does the customer reciprocate value to the producer? Does the producer also experience value?

*Service Innovation Perspective*

Service innovation scholars employ the theory of value co-creation in innovation and technology studies. They view value as customer satisfaction of the service offering; in other words, the ability of the offering to meet customer’s expectations. The research on value co-creation focuses on the benefits of customer participation in service innovation (Breidbach and Maglio, 2014), the role of co-creation in service improvement (Trevisan et al. 2012) and the mediation of technological platforms in the co-creation of value (Mele et al. 2010; Chebiyyam et al. 2016; Zhang et al. 2016; Chuang and Lin, 2015; Hsieh and Hsieh, 2015). However, there is no clarity whether value co-creation ensures innovation or innovation is a precondition to value creation.

*Public Management Perspective*

There has been a call within public management to change the prevalent management thinking in public services, the New Public Management paradigm, to a service dominant thinking. Osborne et al., (2013) argue that the New Public Management approach is ‘obsolete’ owing to its closeness to manufacturing logic. Osborne et al. (2013) proposed the import of service dominant logic tenets into public service management and delivery to ensure a paradigm shift to a service-oriented logic with co-production as the focal point. The scholars integrated the perspectives of service marketing, co-production and public administration to propose a public service dominant logic.
However, there are a number of important differences between the tenets of SDL and the postulations of PSDL. While SDL emphasizes on the customer as an invariable co-creator of value and a voluntary co-producer (Lusch et al. 2016), the PSDL views the service user as constant co-producer since co-production is ‘unavoidable’ (Osborne, 2016). Alfred (2016) buttresses the SDL position by arguing that the service user is not always a co-producer and the involvement in production depends on the circumstances. There is a need for clarity on the roles service users can play in a collaborative service relationship. More importantly, there is a need to understand how service users and providers can combine and co-ordinate resources since the integration of resources is vital to understanding how co-creation of value is attained (Peters, 2016).

**Co-design in public services**
Growing wicked problems in the society have created the appetite for new ways of designing and delivering public services (Sangiorgi, 2015). Budget constraints, intractable economic problems, increasing health issues and ageing population are some of these myriad troubles the government must mitigate to ensure improved standard of living for its citizens (Van de Walle, 2016). Steen et al. (2011) explicate some of the benefits of employing co-design from a service design perspective, some of which include service improvement, better ideas generations and improved efficiency in service delivery. They also pointed out the preconditions to successful implementation, which include identifying the right people to design with, clearly defining the roles within the teams and managing the cost of implementing a co-design project. Vaajkillo et al. (2011) assert that the implementation of co-design in the public sector is usually contained by the organizational culture of public sector organizations that are averse to collaborations and experimentations. It is hard to generalize these claims and findings considering the multiplicity of entities in the public sector and their distinct behaviors.

Research on co-design is growing and extant literature in the field of public management is yet to update or advance our knowledge on the impact of co-design in public service sector. Although public management scholars are interested in illuminating on the subject judging by the growth in co-design research, most of the literature on co-design are still concentrated in the design, arts, service marketing,
business management, information technology and engineering fields. Within the public sector, research on co-design has focused mainly on health sector (Vink et al., 2016) rather than a holistic appraisal of co-design as a co-creative approach in the public service sector.

**NHS Health Innovation Challenge: Healthy Ageing**

The NHS Health Innovation Challenge is about ensuring a rise in healthy living and well-being of middle-aged individuals in Scotland. As part of the innovation process, a co-design workshop was held in Edinburgh Scotland to encourage co-creation and co-ideation of ideas among the multi-sector stakeholders ranging from citizens, public service managers, the third sector, the private sector, students, innovation agencies to government officials. The co-design had four stages: team formation, co-ideation, prototyping, evaluation and presentation/implementation.

*Team formation*

This was the first stage of the co-design process. It involved the grouping of participants from diverse backgrounds into teams for the purpose of co-ideation. A key criterion for selection was the compatibility of ideas, the alignment of goals and objectives. Four teams emerged from the crowd of participants and each team was given a significant amount of time to work on ideation.

*Co-ideation*

This was the second stage of the co-design process. Each member of a team was required to present their ideas to their peers. Members then evaluated and debated over the ideas to find common grounds. Each member had a story-telling material to scribble their views and pictorially describe their ideas.

*Prototyping*

At this stage, rough sketches of ideas were developed into prototypes. The teams had reached a consensus on their ideas and how to depict it. Mock ups and paper prototypes were used to visualize the ideas of each team.
**Evaluation and Presentation**

This was the last stage of the co-design process. Each team appointed one person to present the group ideas to the audience. The ideas of each group were evaluated and rated according to their fit with the problem, feasibility of implementation and innovativeness of the solutions.

**Initial findings and Discussion**

**Co-design is a precursor to resource integration**

The coalescence of resources is essential for the co-creation of value (Vargo and Lusch, 2008; Gronroos, 2008). This is referred to as resource integration: the integration of operant and operand resources (knowledge, skills, people) for the creation of value-in-use. Co-design plays a role in ensuring the integration of resources, which ultimately leads to value co-creation (Kleinaltenkamp et al., 2011). The convergence of multiple stakeholders in a design activity presents an opportunity for the combination of different resources to achieve shared goals and expectations. Gronroos and Voima (2013) opine that resources do not have value in them but their value is dependent on context and objectives.

**Co-design as an engagement platform for value co-creation**

Engagement platforms are intermediaries between two or more interacting participants (Thomas et al., 2014). Co-design provides an opportunity for actors in a design process to engage and interact while exchanging ideas and resources. Wetter-Edman et al. (2013) buttress that co-design as a strand of human-centred design permits the engagement and participation of a wide assortment of people.

**Co-design ensures reciprocal value creation**

An exchange of knowledge and resources through interaction in a co-design process ensures reciprocal creation of value among the stakeholders. Each team member has an expertise, idea and knowledge to contribute to the development of solutions, which others benefit and learn from during the process of brainstorming, ideation and formulation.
Conclusion
Value co-creation in public services is a new phenomenon that contrasts with the New Public Management paradigm. The former is associated with a service dominant logic approach to public service design and delivery while the latter is linked to the manufacturing logic of service creation and delivery. The shift towards value co-creation logic in public services could be engendered by the adoption of co-design approaches. However, the successful implementation of co-design as a resource for value co-creation is dependent on myriad factors that range from seamless team formation, team chemistry, goal alignment to mention a few (Steen et al. 2011). Also, value is not always co-created; sometimes it could be co-destroyed (Echeverri and Skalen, 2011). If the co-design effort flops, participants might ‘misintegrate’ resources, which could lead to value co-destruction (Ple, 2016).

References
Chowdhury, I. N., Gruber, T., & Zolkiewski, J. (2016). Every cloud has a silver lining


creation and co-creation. *Journal of the Academy of Marketing Science, 41*(2), 133–150.


Trischler, J., & Scott, D. R. (2016). Designing Public Services: The usefulness of

