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Conceptualising Resource Integration Process Effectiveness to Assist Australian SMEs to Co-create Value with Paid Cloud Technologies

Full Paper

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Abstract

This study postulates a conceptualisation for firm-level resource integration process effectiveness (FL-RIPE). The focal construct has remained abstract since 2012 without much scholarly attention. This article claims FL-RIPE as a potential antecedent of successful paid cloud adoption by SMEs in Australia and thereby, establishes the significance of investigating its conceptual domain. Through a systematic literature review of 39 journal articles, the study proposes a conceptualisation that depicts FL-RIPE as a function of three observable and measureable firm-level processes (i.e., internal and external coordination processes, organisational learning processes and organisational transformation processes). Several past studies have conceptualised resource integration process and its attributes. However, according to the researchers' knowledge this is the first instance an attribute of resource integration process (FL-RIPE) is conceptualised in the firm-level. This article contributes to the practice by informing SMEs about the existence and the conceptual domain of the focal construct and its significance to successful paid cloud adoption.

Keywords: resource integration process, resource integration process effectiveness, S-D logic, cloud adoption, SMEs in Australia

1 INTRODUCTION

The evolution of cloud computing is one of the major advances in the history of computing (Marston et al. 2011). It is considered as a disruptive innovation (Ross and Blumenstein 2015) because it allows to deliver computing as a utility, just like water, gas, electricity, etc (Voorsluys et al. 2011). Furthermore, it is believed to be a technology that has enabled small and medium sized enterprises (SMEs) to access computing facilities which were largely accessed by large firms in the past. Hence, cloud computing has levelled the playing field for SMEs with their larger counterparts in terms of access to computer technologies. Therefore, researchers on business perspective of cloud computing argue SMEs would do much better in cloud adoption compared to large firms (e.g., Marston et al. 2011; Ross and Blumenstein 2015; Yazn et al. 2013; Avram 2014; Trigueros-Preciado et al. 2013).

Nevertheless, SMEs worldwide are struggling to adopt paid cloud technologies successfully compared to large firms (Al-Isma'ili et al. 2016). SMEs in Australia are no exception. While more than 70% of the large firms have already adopted paid cloud computing services successfully, the percentage remains less than 40% for the SMEs due to various challenges, even though a majority of the SMEs are willing to adopt paid cloud technologies because they understand the benefits offered by cloud technologies (Australian Bureau of Statistics (ABS) 2019). Among the challenges, SMEs' knowledge deficiency on cloud technologies (Bildosola et al. 2015; Love et al. 2005; MacGregor and Vrazalic 2005; Senarathna et al. 2018) appears to be the most serious impeding to paid cloud adoption (ABS 2019). According to the "Service-Dominant Logic" (S-D logic), knowledge deficiency is a result of micro-specialisation (Lusch and Vargo 2006). Think of Telstra. Telstra is micro-specialised in providing telecommunication services to retail and corporate customers. However, they are not manufacturing their own equipment because they do not possess the micro-specialisation of telecommunication equipment design, development and manufacturing. Hence, they borrow the micro-specialisation from a supplier by purchasing hardware and software. However, borrowing alone will not solve the issue of knowledge deficiency. According to the S-D logic, firms should possess the capability to co-create value with the borrowed goods and/or services.

The S-D logic "transcends the tangible-intangible divide and reflects the shifts to network-centric, information-centric, and experience-centric innovation" (Vargo and Lusch 2004, p.2) and suggests service (defined as the process of doing something for someone) as the starting point of innovation (Lusch and Nambisan 2015). The S-D logic is defined by using eleven foundational premises (FPs) (Vargo and Lusch 2016). According to the sixth (i.e., value is co-created by multiple actors, always including the beneficiary) and tenth (i.e., value is always uniquely and phenomenologically determined by the beneficiary) FPs, alleviating or overcoming knowledge deficiencies and successful adoption of cloud technologies is a situation where value is co-created. Value co-creation is a situation where an entity improves its circumstances (Vargo and Lusch 2008). Furthermore, it is an outcome of a process called "resource integration" that is discussed in the eighth FP (i.e., all social and economic actors are resource integrators) (Carida et al. 2019).

Resource integration process is carried out by three types of actors in an organisation, namely, ideators, designers and intermediaries (Lusch and Nambisan 2015). They create new knowledge and assist firms to alleviate or overcome knowledge deficiencies and/or create new knowledge (i.e., co-create value) (Lusch and Nambisan 2015). What if the actors fail to alleviate or overcome existing knowledge deficiencies through the resource integration process? Such an outcome does not improve the circumstances of the firm and is referred to as a situation where value is co-destroyed. Hence, the outcome of a resource integration process can be twofold; either value co-creation or value co-destruction. Since value co-destruction is the undesirable outcome, firms are striving towards avoiding value co-destruction (Plé 2017). Therefore, a firm's ability to co-create value regularly when pursuing their consumption goals and projects is an important competency for any firm that strive towards business success.

The level of the competency to co-create value is determined by a firm-level attribute called "resource integration process effectiveness" (Hibbert et al. 2012). This attribute differs from firm to firm. Therefore, it is important for every firm to have an understanding of their resource integration process effectiveness. Despite the significance of the concept, past researchers have hardly taken an effort to conceptualise resource integration process effectiveness and explain the sub-attributes that it is made up of. In other words, resource integration process effectiveness is still an abstract construct that needs a proper conceptualisation. Such a conceptualisation is a contribution to the knowledge gap highlighted above (i.e., Australian SMEs' knowledge deficiency on cloud computing) because as explained earlier, resource integration process effectiveness is a vital organisational level attribute that determines an SMEs capability to regularly co-create value (e. g., alleviating or overcoming knowledge deficiencies and

successfully adopting cloud computing technologies) when pursuing their consumption goals and projects. Therefore, this study does a scholarly investigation on the conceptual domain of resource integration process effectiveness. The rest of this paper is organised into four sections, namely, research methodology, literature review, discussion and conclusion. In section 2 the methodology of the research is discussed. The literature review is organised as a critical inquiry into previously developed theoretical constructs of resource integration process effectiveness and other research findings. This literature review also inform the postulated conceptual framework of the study. The fourth section discusses theoretical and practical contributions, limitations and suggestions for future researchers. The paper ends with the conclusion of the study.

2 METHODOLOGY

This article proposes a definition and a conceptualisation for the focal construct of the study (i.e., resource integration process effectiveness) through a systematic literature review. A systematic literature review is a methodical investigation of a particular aspect using a predetermined plan (Jones and Evans 2000) that comprises of six steps (i.e., “preparing a review question, selecting criteria for inclusion of articles in the review, systematically searching the published and unpublished literature, determining which articles meet the predefined inclusion criteria, critically appraising the quality of the research, extracting outcome data from the research report and summarising the best available evidence on the topic of interest” (Jones and Evans 2000)).

In this article, the review was carried out for the purpose of formulating a definition for the resource integration process. Therefore the review question is; *what is the definition of resource integration process?* Only peer-reviewed articles from conferences, journals and books were considered for the review. The search process was carried out in three steps mentioned below.

- Step 1 - The phrases; “resource integration”, “resource integration process” and “resource integration process AND Service-Dominant logic” were searched in the Scopus database. Resource integration and resource integration process returned a vast number of irrelevant responses. Therefore, only the responses of the phrase resource integration AND Service-Dominant Logic were considered. 89 unique search results were obtained.
- Step 2 - Out of the 89 search results, 27 journal papers, conference papers and book chapters that had “resource integration” as one of the keywords were filtered out.
- Step 3 - The authors did a manual search of the phrases “resource integration”, “resource integration process” and “resource integration process AND Service-Dominant logic” in Google Scholar and identified 12 journal papers that were not returned in the search results of Step 1.

Since 39 selected articles were peer-reviewed, it was assumed that they are of acceptable quality to be used in the review. Next, a careful review of the articles was carried out to develop an answer to the review question. A detailed discussion of the information extracted from the review is presented in the next section (i.e., literature review). Once an answer was developed for the review question, that answer was utilised to propose a definition for the focal construct of the study (i.e., resource integration process effectiveness). Then the conceptualisation of the focal constructed was developed based on the formulated definition.

3 LITERATURE REVIEW

This literature review is dedicated to logically develop a definition and a conceptualisation for the focal construct of the study; resource integration process effectiveness. Peters et al (2014) discuss two approaches to define and conceptualise resource integration process and its attributes (i.e., object-oriented approach and subject-oriented approach). It is impossible to propose a single, agreed definition for the focal construct by following a subject-oriented approach (Peters et al. 2014). Almost all the definitions that has been proposed for resource integration process and its attributes in the past have adopted a subject-oriented approach. There is hardly any study that has adopted an object-oriented approach. This study has an object-oriented approach because the study believes the proposed definition and the conceptualisation can be applied to explain the resource integration process effectiveness of any SME (i.e., the existence of a single reality instead of multiple realities).

The literature review is divided into two main sections. First section defines the resource integration process from a realist ontology and a positivist epistemology. The second section utilises the definition suggested by the first section and proposes the definition and the conceptualisation of the focal construct (i.e., resource integration process effectiveness).

3.1 Defining Resource Integration Process

According to the ninth FP of S-D logic (i.e., “all social and economic actors are resource integrators”) resource integration process is an individual-level process because, even though it is seen by the outside world that the organisation carry out the resource integration process, in reality, it is the individual employees inside organisations actually carry out resource integration with acquired goods and/or services, existing resources and resources acquired from third-party actors such as customers, suppliers, independent consultants, etc (Vargo and Lusch 2008). Due to the involvement of diverse set of actors, extant literature describes resource integration process as a collaborative and interactive process (Aal et al. 2016; Kleinaltenkamp et al. 2012; Lusch and Nambisan 2015, Peters et al. 2014). Therefore, when proposing a conceptualisation for the resource integration process effectiveness, one possibility is to consider resource integration process as a collaborative and interactive process. However, there are alternative viewpoints that disregard resource integration process as a collaborative and interactive process. Therefore, the rest of this section is dedicated to develop a clearer definition for the resource integration process.

The systematic literature review reveals resource integration process can be categorised into two groups. The first group of researchers have focused on the conceptual development of resource integration process and its attributes by proposing various conceptualisations (e.g., Vargo and Lusch 2006; Kleinaltenkamp et al. 2012). The second group of researchers have tested the empirical validity of the resource integration process in practice (e.g., Baron and Warnaby 2011; Hilton et al. 2013). They have not taken an effort to extend the conceptual understanding of the resource integration process. They have utilised the general understanding of the concept (i.e., resource integration process is an interactive process that is carried by a various set of actors including the beneficiary) to explain certain practical phenomenon. Therefore, the discussion of the second group of researchers appears to be one-dimensional. However, it is not the case with the first group of researchers. They have contributed to the conceptual development of the concept by introducing mutually exclusive conceptualisations for the resource integration process. The present study identifies six such studies (i.e., Colurcio et al. 2017; Carida et al. 2019; Kleinaltenkamp et al. 2012; Laud et al. 2015; Peters et al. 2014 Vargo and Lusch 2006). They are further scrutinised to investigate the nature of the resource integration process. The review reveals two schools of thought regarding resource integration process (i.e., resource integration as an emergent process and resource integration as an interactive and collaborative process).

One school of thought argues resource integration as an emergent process that produces a measurable outcome (Peters et al. 2014). The other school of thought argues resource integration as a collaborative and interactive process. Their focus is on the *process* that leads to value co-creation. When considering resource integration process as an emergent process, the focus is on the *outcome* that creates value; not on the process that creates value (Peters et al. 2014). For example, consider a situation which an SME adopting a cloud computing solution from a cloud service provider. If the resource integration process is considered as a collaborative and interactive process, the focus should be on the processes and activities the SME carries out to successfully adopt the cloud solution. On the contrary, if the resource integration process is considered as an emergent process, the focus should be on the performance of the new cloud computing service (e.g., is there a cost saving compared to the past? is there an improvement in the energy consumption by information technology systems?). According to the tenth FP of the S-D logic (i.e., value is always uniquely and phenomenologically determined by the beneficiary) measuring performance and properties of an outcome belongs to the value assessment process that determines whether a value is co-created or co-destroyed (Vargo and Lusch 2008, 2016). Therefore, it is debatable whether resource integration process can be conceptualised as an emergent process. Furthermore, apart from Peters et al. (2014) hardly any study has claimed resource integration as an emergent process. Hence, the rest of this section focuses on the second school of thought that claims resource integration process as a collaborative and interactive process.

Even though resource integration process is not a part of the introductory paper of the S-D logic, Vargo and Lusch (2004) discuss the collaborative and interactive nature of the processes that co-create value. They refer to the process that co-creates value as “bundles of skills and knowledge that are represented by routines, actions and operations that are tacit, ambiguous and idiosyncratic” (Vargo and Lusch 2004, p. 5). Later, Vargo and Lusch (2006) argue coordination/integration and transformation of core competencies into complex services that are demanded by the society as the main purpose of a resource integration process. They further highlight coordination and transformation of core competencies are achieved through collaboration and interaction between individual employees who are micro-specialised. In other words, micro-specialisation of individuals has made resource integration through collaboration and interaction inevitable (Vargo and Lusch 2006). Therefore, in today’s business context,

it is mandatory to combine resources through collaboration and interaction when firms pursue their consumption goals and projects.

Kleinaltenkamp et al (2012) propose a conceptualisation for the resource integration process. According to their argument resource integration process consists of five components, namely; resource integrators, resources, integrating resources, evaluation and value. Their conceptualisation consists of components that a few other scholars have considered as outcomes of resource integration (e.g., evaluation, value). For an example, even though Kleinaltenkamp et al. (2012) have considered value as a component of resource integration, value is considered as an outcome of resource integration by several other studies (Carida et al. 2019; Vargo et al. 2008; Vargo and Lusch 2008). However, this study focuses on Kleinaltenkamp et al's (2012) explanation of *integrating resources*. Kleinaltenkamp et al. (2012) highlight the need of designing and configuring resources through collaborative and interactive processes to integrate resources. In other words, Kleinaltenkamp et al. (2012) agree with the fact that resource integration is a collaborative and interactive process.

In a more recent study, Laud et al. (2015) conceptualise resource integration process as a function of six key practices, namely; accessing, adapting, mobilising, internalising, transforming and applying. Laud et al. (2015) acknowledge collaboration and interaction among individual actors is an integral part of the resource integration process by including two practices (i.e., accessing and mobilising) in their conceptualisation to highlight the collaborative and interactive nature of the resource integration process.

Colurcio et al. (2017) define resource integration as the central process of innovation and value co-creation. The study argues innovation and value co-creation is driven through a set of collaborative and interactive processes carried out by beneficiaries with the support of service providers and other stakeholders. Colurcio et al. (2017, p. 253) further argue that the "resource integration process is centred on actors' interactive practices". Therefore, Colurcio et al. (2017) also endorse the fact that the resource integration process is a collaborative and interactive process that drives value co-creation or co-destruction.

In another study, Carida et al. (2019) define resource integration as a three-step process. Steps are matching, resourcing and valuing. 'Matching' is the pre-phase of the resource integration process driven by the interaction between the actors in the service ecosystem. During the matching stage, actors interact with each other to achieve the higher level of resource density (i.e., mobilisation of relevant knowledge contextually in the most effective and efficient way (Lusch and Nambisan 2015)) using available resources. During the resourcing stage, actors focus on resource creation by combining potential resource with existing resource to convert potential resources to actual resources with benefits (Carida et al. 2019). Combining resources takes place through coordination between actors in the service ecosystem. In the final stage of the resource integration process (i.e., valuing), actors do an assessment to determine whether a value co-creation has taken place or not (Carida et al. 2018). In an organisational context, value assessment should ideally be done through an interaction between employees because value determination is a collective process in an organisational context. Therefore, valuing is also a process that requires collaboration and interaction among individuals in the eco-system. However, as mentioned previously, it is debatable whether valuing is a part of the resource integration process because the tenth FP of the S-D logic suggests it is conducted through a process called value assessment that takes place after the resource integration process. However, despite the confusion on valuing, Carida et al. (2019) also endorse resource integration process as a collaborative and interactive process.

Based on this background, it is evident that the resource integration process is a collaborative and interactive process. Therefore, this study defines the resource integration process as a collaborative and interactive process that takes place between a network of actors, goods and/or services and existing resources in a specific service eco-system for the purpose of value co-creation by combining acquired goods and services and existing resources (both operand resources and operand resources).

3.1.1 Defining the Firm-Level Resource Integration Process

As discussed above, resource integration process happens in a service eco-system. Peters (2012) suggests five such eco-systems based on the levels individuals operate (individual, group, firm, industry and network level eco-systems). As discussed in section 3.1, the 39 selected journal papers can be categorised into two categories, namely, conceptual studies (e.g., Kleinaltenkamp et al. 2012; Laud et al. 2015) and empirical studies (e.g., Hughes et al. 2018; Jefferies et al. (in press)). Except for Plé (2016), hardly any conceptual study has considered the levels suggested by Peters (2012). However, the majority of the empirical studies have adopted the eco-system levels suggested by Peters (2012). Furthermore, hardly any empirical study has developed their arguments on top of the existing conceptual studies. This

suggests the significance of considering the eco-system levels proposed by Peters (2012) when proposing conceptualisations for resource integration process and its attributes. Therefore, since this article is focusing on SMEs, the study establishes a firm-level definition for the resource integration process which is discussed in the following paragraph. Peters et al. (2014) suggest viewing the interactivity of the resource integration process as a set of context-based *observable and measurable processes*. Since the focus of the present study is in the *firm level* (i.e., context), the interactivity of the resource integration process can be viewed as a set of observable and measurable *organisational processes*. Hence, the firm-level resource integration process can be defined as a set of observable and measurable organisational processes that takes place between a network of actors, goods and/or services and existing resources for the purpose of value co-creation.

3.2 Conceptualising Resource Integration Process Effectiveness

The word *effectiveness* is defined as “the degree to which something is successful in producing a desired result” (LEXICO powered by OXFORD 2019). Based on the definition of the resource integration process, it is possible to define the firm level resource integration process effectiveness as the degree to which the observable and measurable organisational processes are successful in co-creating value when firms are pursuing their consumption goals and projects. In other words, resource integration process effectiveness can be conceptualised as a function of effectiveness of observable and measurable organisational processes.

The dynamic capabilities framework (DCF) presented by Teece and Pisano (1994) proposes a comprehensive set of observable and measurable organisational processes. According to Teece and Pisano (1994) and Teece et al. (1997), organisational processes can be explained by three sub-processes; “internal and external coordination processes”, “organisational learning processes” and “organisational transformation processes”. They are considered as indirect sources of competitive advantage of a firm. Studies carried out by Allred et al. (2011), Eisenhardt and Martin (2000), Teece and Pisano (1994), Teece et al. (1997) and Teece (2007) highlight interaction and collaboration among different actors is an integral part of the three sub-processes mentioned earlier. Therefore, the present study assumes the FL-RIPE as a construct that can be explained with above mentioned firm specific sub-processes.

3.2.1 Internal and External Coordination Processes

According to the DCF, coordination is an important organisational and managerial process that determines the competitive position of an organisation in a specific market (Eisenhardt and Martin 2000; Teece and Pisano 1994; Teece et al. 1997; Teece 2007). There are two forms of coordination, namely, internal and external. The way each organisation conducts internal and external coordination depends on the organisational routines (Teece and Pisano. 1994; Teece et al. 1997). Organisational routines are firm-specific. Organisations with superior competitive position have routines that are superior to its competitors. Furthermore, those routines are hard to imitate and replicate (Eisenhardt and Martin 2000; Teece and Pisano 1994; Teece et al. 1997; Wang and Ahmed 2007). According to Lusch and Nambisan (2015) routines are developed by the processes and activities carried out by three types of resource integrating actors (i.e., ideator, designer and intermediary). They conduct internal and external coordination for the purpose of effectively integrate resources to co-create value. Ideators conduct internal coordination for the purpose of sharing knowledge outputs with other actors in the service ecosystem (i.e. to convert tacit knowledge in to explicit knowledge) (Lusch and Nambisan 2015). Designers mix and match operant and operand resources to create new resources. In the process, they do both internal and external coordination to grasp the knowledge component of each resource. Intermediaries do external coordination for the purpose of exporting and importing operant and operand resources. Therefore, it is obvious that different types of actors do internal and external coordination when integrating resources. Hence, internal and external coordination processes can be considered as a sub-process of the resource integration process.

3.2.2 Organisational Learning Processes

Collaboration and interaction between individuals and organisations is considered as the driving force of organisational learning (Wang and Ahmed 2003). The DCF considers organisational learning process as a more important process than other two processes, because, learning facilitates the process of creating organisational routines (Eisenhardt and Martin 2000; Teece and Pisano 1994; Teece et al. 1997). When inter-organisational and intra-organisational learning take place, individual and collective learning take place for the purpose of knowledge creation. The newly created knowledge through individual and collective learning resides in organisational routines. Therefore, learning is a basic building block of internal and external coordination processes. Furthermore, Teece and Pisano (1994, p. 545) and Teece et al. (1997, p. 520) contend that organisational transformation processes require

“constant surveillance of markets and technologies and the willingness to adopt best practice”. This surveillance process is highly dependent on the organisational learning process (Peler et al. 1989).

From the perspective of the S-D logic, learning process is one of the key underlying processes that takes place during the value co-creation process, because, it improves the capabilities of the actors in a service eco-system (Hughes and Vafeas 2018). Lusch and Nambisan (2015) also emphasise the criticality of the learning process for the resource integrating actors to frequently co-create value. Ideators have to learn about the existing market offerings, work context, needs of the organisation and needs of the customers during the process of coming up with new market offerings. Designers have to continuously learn existing market offerings to come up with new market offerings. Intermediaries are also in a continuous learning process that eventually determine the knowledge that should be exported and/or imported across the boundaries of the organisation. Hence, organisational learning processes can also be considered as an integral part of the resource integration process.

3.2.3 Organisational Transformation Processes

Organisational transformation processes are required to reengineer, redesign and redefine business systems (Dietz and Mulder 1998). Teece and Pisano (1994) and Teece et al. (1997) highlight the importance of adapting existing processes or adopting new processes by reengineering, redesigning and redefining business systems to accommodate necessary organisational transformations that are required to maintain the competitive position of a firm in a dynamic environment. From an S-D logic perspective, adapting existing processes or adopting new processes to accommodate necessary value co-creation processes and activities is an integral part of the resource integration process (Lusch and Nambisan 2015) because the underlying activities and processes that carry out a resource integration process always bring about a transformation. Scale of the transformation can vary depending on the situation. Therefore, organisational transformation processes can also be considered as a component of the resource integration process.

Based on this background, it can be argued resource integration process effectiveness as a function of effectiveness of three observable and measurable organisational processes discussed above (i.e., internal external coordination processes, organisational learning processes and organisational transformation processes). The proposed conceptualisation for the focal construct (i.e., resource integration process effectiveness) is depicted in Figure 1. Hence, the degree to which the observable and measurable organisational processes are successful in co-creating value when firms are pursuing their consumption goals and projects fluctuates according to the variation of the effectiveness of each observable and measurable organisational process.

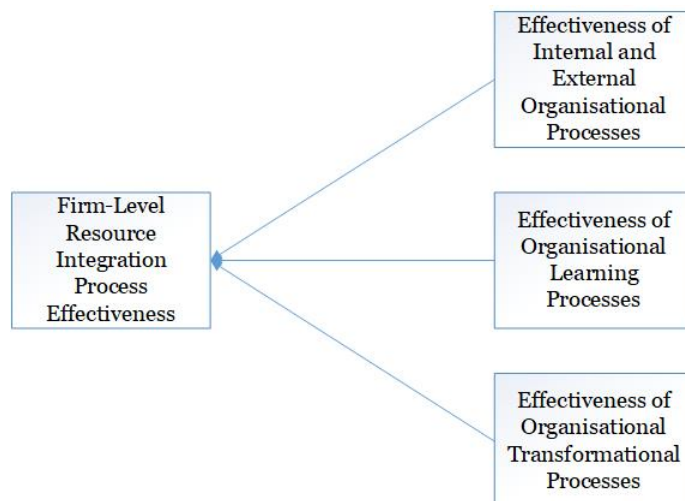


Figure 1: Proposed Conceptualisation for Resource Integration Process Effectiveness

4 DISCUSSION

Since 2004, researchers have contributed extensively towards S-D logic related general theory development. That has enhanced the acceptance of S-D logic among the academic community. However, S-D logic has failed to gain the same level of acceptance among the practitioners mainly due to lack of testable midrange theories (e.g., conceptual frameworks) and micro theories (e.g., evidence-based research) (Vargo and Lusch 2017). Therefore, Vargo and Lusch (2017) have highlighted the importance

of developing S-D logic related midrange theoretical frameworks and conducting S-D logic related evidence-based research while advancing general theory. The present study proposes a testable midrange theoretical framework and contributes towards the call of Vargo and Lusch (2017). The importance of the proposed framework is, it is the first instance an attribute of the resource integration process is conceptualised with a realist ontology and a positivist epistemology. Previous conceptualisations of the resource integration process and its attributes are proposed with a relativist ontology and an interpretivist epistemology. Furthermore, this is the first instance a resource integration process related conceptualisation considered the eco-system categorisation of Peters (2012). All the past conceptualisations have ignored Peters (2012) and considered “eco-system” as the entity which the conceptualisations apply. According to MacKenzie et al (2011), when defining the conceptual domain of a construct, one of the major steps is to clearly define the “property” which the conceptualisation represent and the “entity” which it applies to. This study defines both (i.e, the property and the entity) and addresses one of the major limitations of past conceptualisations. Furthermore, this study discusses the applicability of the S-D logic related concepts in the domain of information systems by proposing firm-level resource integration process effectiveness as a potential antecedent of successful paid cloud adoption.

Any firm in today’s business context is striving towards co-creating value through projects and operations. However, not many firms are capable of co-creating value frequently. Those who are capable survive while others fail and quit. Resource integration process effectiveness is the firm-level property that determines the degree to which a firm is capable of successfully co-creating value when pursuing its consumption goals and projects. Firms with a higher level of resource integration process effectiveness would possess the capability to co-create value frequently; hence, would survive. On the contrary, firms with a lower level of resource integration process effectiveness would not co-create value frequently; hence, would fail and quit. However, despite the significance, prior to this study, practitioners were not aware of the existence of the focal construct. Therefore, the awareness of the existence of FL-RIPE and clarifying the property it represents are practical contribution this study does. Furthermore, this article conceptualises the key elements of FL-RIPE (i.e., internal and external coordination processes, organisational learning processes and organisational transformation processes) and informs practitioners about the firm-level components that determine the degree to which a firm is capable of successfully co-creating value. This holistic view of the construct is really important for the practitioners because without a holistic view they cannot strike a balance between the components when carrying out project and/or operations. For example, limited focus on the effectiveness of internal and external coordination processes might adversely affect the effectiveness of organisational learning processes (e.g., learning might take time) regardless of the enthusiasm of the three types of actors. Similarly, limited focus on the effectiveness of organisational learning process might adversely affect the effectiveness of internal and external coordination processes (e.g., failure to establish firm-level routines to facilitate effective internal and external communication). If the focus is limited on the organisational transformational processes, projects and/or operations might end up without co-creating value (e.g., introduction of a new service without training customer service staff). Another practical contribution this article does is informing SMEs/practitioners about a potential antecedent of successful paid cloud adoption. However, one important aspect practitioners should understand is FL-RIPE is not only an antecedent of successful paid cloud adoption; but of any firm-level value co-creation effort.

Despite its contributions, this article has limitations. Even though the article starts its discussion by highlighting an issue faced by Australian SMEs (i.e., knowledge deficiency on cloud technologies are preventing Australian SMEs from taking an effort to adopt paid cloud technologies even though they are aware of the benefits offered by the technology), the proposed conceptualisation is not unique to Australian SMEs. It is applicable to SMEs outside Australia and large firms as well. It is up to the future researchers to discover the elements applicable to SMEs through empirical research by using methodologies suggested by Churchill (1979), DeVellis (2012) and MacKenzie et al. (2011). Furthermore, even though the article clearly develops an argument to explain how a highly effective resource integration process can be an antecedent of successful paid cloud adoption by SMEs, justification is conceptual in nature. Therefore, to establish the empirical validity of the claim, the nature of the relationship between FL-RIPE and successful paid cloud adoption by SMEs should be further investigated using quantitative and/or qualitative research methods. When considering the methodological aspect, this article followed the methodology (i.e., systematic literature review) proposed by Jones and Evans (2000). Even though it is an established and acceptable methodology, it is not developed for the sole purpose of conceptualising constructs. There are other methodologies that are solely proposed for the purpose of defining conceptual domains of constructs in recent years (e.g., DeVellis (2012), MacKenzie et al. (2011)). Future researchers can re-conceptualise resource integration process effectiveness by following the steps suggested by those methodologies.

5 CONCLUSION

In a business world where competition is extremely fierce, value co-creation in a majority of the projects and/or operations is key for any firm because it is the force that would drive firms forward by continuously leveraging their existing circumstances (Vargo et al. 2008). With the rapid growth of global communication networks, value co-creation with cloud computing services has become a hot topic among the practitioners and researchers alike. SMEs have a special place in the cloud computing debate because cloud computing offers a certain set of benefits that has the potential to flatten the playing field for them with their larger counterparts.

SMEs are a very important component of the Australian economy because more than 99% of the Australian firms are fallen under the category of SMEs. It is argued that adoption of paid cloud computing technologies by SMEs have the capability to increase operational efficiency and reduce capital expenditure. Furthermore, increased national cloud adoption rate would do a considerable cost saving. However, paid cloud computing technology adoption rate by SMEs in Australia remains low (i.e., <40%) compared to larger enterprises. This gives a prominence to the studies that have investigated the antecedents of successful cloud adoption by SMEs (an instance where value is co-created). This study proposes a novel antecedent (i.e., FL-RIPE) of successful cloud adoption by SMEs. Furthermore, the article proposes a conceptualisation for the FL-RIPE through a systematic literature review. The conceptualisation offers a holistic and broadened view of the focal construct to academics and practitioners alike. However, due to the conceptual nature of this article, the proposed framework is not unique to Australian SMEs. Hence, future researchers will have to take the initiative to validate the proposed conceptualisation in the Australian contexts through empirical research to identify the applicable components. Furthermore, the outcome of this study (i.e., conceptualisation of the FL-RIPE) is significant for the future of the paid cloud adoption research and object-oriented research on the resource integration process and its attributes.

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