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EXPLORING THE ADOPTION OF SUSTAINABLE SUPPLY CHAIN PRACTICES IN AUSTRALIA: CURRENT PRACTICES AND ADOPTION MOTIVATIONS

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Abstract

Organizations worldwide are developing an awareness of the importance to adopt sustainable practices within their supply chain operations. Many forward looking organizations have even already begun implementing these practices in consultation with their supply chain partners. However, adoption of these practices is not straightforward and is reported to be slower than expected despite the enormous benefits these practices can bring when they are successfully adopted. Currently, there is limited understanding of what motivates organizations adopting SSCM practices and how adoption motivations affect the adoption level and benefits obtained. In this study, we explore the adoption of SSCM practices by selected Australian organizations and investigate their adoption motivations. For the study purpose, we apply the organizational adoption motivation framework discussed in the literature of inter-organizational systems (IOS) and propose a framework that differentiates four SSCM adoption motivation scenarios. Using the proposed framework, we have conducted a series of interviews with four Australian organizations that are currently engaged in SSCM practices. The preliminary study finding highlights the existence of multiple types of SSCM adoption motivation types originating from internal and external sources. This finding helps direct future research efforts in exploring the impacts of adoption motivations on SSCM implementation and benefits.

Keywords: sustainability, sustainable supply chain, adoption, motivation, Australia

1 INTRODUCTION

In recent years, 'sustainability' has become a global concern and has attracted attention of media, government and organizations around the world. In response, many forward looking organizations are now revisiting their supply chain operations taking into consideration of their responsibility towards social and environmental concerns (Capaldi, 2005; Carter and Easton, 2011; Chaabane et al., 2012). This has given rise to the concept of Sustainable Supply Chain Management (SSCM). According to Kurnia et al (2012) and Seuring (2008), SSCM refers to "the management of material, information and capital flows as well as cooperation among companies along the supply chain, taking into account the economic, environmental and social dimensions, based on customer and stakeholder requirements". The current conceptualization of SSCM practices requires organizations to implement and address sustainability across three dimensions (i.e., economic, environmental and social) which are collectively known as triple bottom line (TBL) (Carter and Dale S. Rogers, 2008; Seuring and Müller, 2008; Teuteberg and Wittstruck, 2010). There is a growing recognition in the business community of the significance of implementing SSCM practices.

Despite the importance of SSCM, however, implementing SSCM practices is complex due to the inter-organizational nature. Many of SSCM practices such as green procurement and reverse logistics cannot be adopted by an organization in isolation from other trading partners within the supply chain. Adopting inter-organizational systems involves multiple parties with diverse and sometimes conflicting interests operating within different legal frameworks which often complicate the adoption (Kurnia, 2000; Linton et al., 2007; Simchi-Levi et al., 2010). The increasing complexity imposed by SSCM practices that address TBL requires better coordination of activities and higher level of information sharing among supply chain participants for monitoring, controlling and collaboration purposes. Given the complexity involved and a relatively long period before the economic benefits can be achieved, many organizations are still reluctant to implement SSCM practices (Wittstruck and Teuteberg, 2012). Only a limited number of organizations have been proactive in implementing the SSCM practices, which will not benefit the community to a large extent unless the practices are adopted widely.

Currently, there are still a limited number of studies investigating the status of SSCM practices and the adoption motivations of those adopting organizations (Dao et al., 2011; Sridhar, 2011). In fact, understanding the adoption motivations of various organizations may help encourage more organizations to implement SSCM practices. Moreover, the existing organizational motivation studies in the area of inter-organizational system adoption (e.g. Rahim et al., 2007; 2011) identify a relationship between adoption motivations and benefits that can be expected by the adopting organizations. In addition, organization motivation theory helps explain the variance in the implementation process (Johnston et al., 2007). Therefore, studying SSCM adoption from the perspective of organizational motivation would provide useful insights into the expected benefits of SSCM practices and the implementation process which in turn would influence decision making regarding adoption of a particular SSCM practice.

In Australia particularly, there are significant research opportunities to investigate SSCM practices in a deeper way from various angles to help organizations better understand SSCM practices and their implications, adoption status, adoption motivations and ways to overcome adoption difficulties. The SSCM literature has been dominated by the quantitative studies that have limited access to the study context (Chien and Shih, 2007; Zhu et al., 2007; Seuring and Müller, 2008; Awaysheh and Klassen, 2010). To address some of the knowledge gaps in the area of SSCM, in this study, we conducted a preliminary investigation into the current SSCM practices and adoption motivations of selected organizations which are considered as leaders in SSCM practices in Australia. Specifically, the following research questions are addressed:
1. What SSCM initiatives are practised in Australia?
2. What are the motivations for adopting SSCM initiatives in Australia?

Through this study, we expect to contribute to the current understanding and literature of SSCM adoption and adoption motivation. In this paper, however, we do not include the assessment of the benefits and how they are related to the adoption motivations. The focus of the study is on the initial theoretical framework development of SSCM adoption motivations and the preliminary assessment of the framework. Both the qualitative nature of the study and the Australian context will complement the existing studies in the SSCM adoption. The study findings also have important implications to the practitioners as they can be used to better understand the adoption motivations of SSCM.

2 RELATED BACKGROUND LITERATURE

2.1 An overview of SSCM

In the last two decades, supply chain management practice among leading organizations has addressed not only economic concerns, but also environmental and social concerns, under the notion of Sustainable Supply Chain Management (SSCM). The concept of SSCM has gained much attention due to the global sustainability concern. Research indicates that various activities within a typical supply chain that are necessary to provide consumer goods and services produce significant amount of undesirable waste and gas emissions that are harmful to the environment (Hertwich and Peters, 2009). In addition to environmental concern, social issues have also been increasingly addressed by organizations through various sustainability initiatives. Therefore, the concept of SSCM addresses the Triple Bottom Line (TBL) which includes the economic, environmental and social aspects of sustainability.

The traditional focus of SSCM has been on economic sustainability, which has dominated the literature. Studies focusing on the economic sustainability assess various aspects of SCM focusing on ensuring healthy cash flow, good profit margins and a proper return on investment, business performance improvement and competitive advantage (McCormack et al., 2008; Ketchen et al., 2011). As the notion of sustainability has attracted more attention within society, the literature on SSCM practices relating to the environmental dimension of sustainability has grown substantially over the past decade, which has created a stream known as green supply chain management (GCSM) (Sarkis et al., 2011). In this stream, scholars are concerned with the environmental impacts of SCM and focus their investigations on initiatives such as supplier selection and development, green purchasing, renewable energy use, environmentally friendly disposal or reverse logistics (Sarkis, 2003; Walker et al., 2008; Ninlawan et al., 2010; Sarkis et al., 2011). Furthermore, the literature has addressed the social dimension of sustainability by investigating various social aspects such community issues, corporate governance, diversity considerations, employee relations, human rights and diversity, educational and ethical considerations, training and development and safety (Chabowski et al., 2011; Closs et al., 2011; Scott, 2011). Behind the various SSCM practices, IT plays important roles in automating various business processes, providing and sharing various information among trading partners as well as in transforming business practices, which help organizations achieve benefits (Dao et al., 2011). Emerging social media technologies have also been identified to play a role in assisting organizations to implement a number of SSCM practices particularly within the social dimension to better engage the community, create awareness and encourage acceptance of various socially sustainable practices (Andersen and Skjoett-Larsen, 2009; Burrus, 2010).

The benefits of implementing SSCM practices have been discussed in a number of existing studies (Majumdar and Nishant, 2008; Moore and Manring, 2009; Wagner and Svensson, 2010; Wittstruck and Teuteberg, 2012). These benefits vary from operational benefits that are the results of more efficient and effective business process, to strategic benefits which take longer time to be realized by the adopting organizations. For example, through the implementation of initiatives such as eco-design of products, green distribution, and waste management, organizations have lowered the costs associated to business operations particularly in the area of logistics and utilization of resources (Rao and Holt, 2005; Nunes and Bennett, 2010). Likewise, initiatives addressing the social dimension such as ensuring work safety and product safety have led to improved process control and risk management (Moore and

Manring, 2009; Eltayeb et al., 2011; Ageron et al., 2012). Beside operational costs, various benefits that are more strategic in nature and more difficult to quantify have also been discussed in the literature including transparency of processes, staff loyalty, customer satisfaction and loyalty and enhanced corporate image and reputation (Rao and Holt, 2005; Moore and Manring, 2009; Wagner and Svensson, 2010; Eltayeb et al., 2011; Ageron et al., 2012; Wittstruck and Teuteberg, 2012). However, strategic benefits are generally more dominant and significant than immediate operational benefits in the context of SSCM and therefore, the benefits of SSCM are often not noticeable. This in turn considerably contributes to the slow adoption of SSCM practices globally (Wittstruck and Teuteberg, 2012).

2.2   Adoption motivations in the SSCM empirical literature

We find that existing SSCM literature is deficient in treating adoption motivation as a research variable using a sound theoretical lens. Despite this deficiency, there are a number of existing empirical studies reported in the sustainability literature about the motivational drivers encouraging organizations to adopt SSCM practices. For example, several studies indicate that one of the main drivers is the *pressure from consumers* who are becoming more aware of the global sustainability concerns and hence value those organizations who take an active role in addressing the sustainability issue (Hall, 2000; New et al., 2000; González-Benito and González-Benito, 2005; Mollenkopf et al., 2010). Similarly, organizations may be motivated to adopt SSCM because *other organizations within the industry* have started engaged in SSCM practices (Rao and Holt, 2005; Reuter et al., 2010). Likewise, *pressure to identify and manage supply chain risks* imposed by various stakeholders including workers, investors and unions has also been well recognized in the literature as one of the drivers for organizations to practise SSCM (Hanna et al., 2000; Eltayeb et al., 2011). In addition, some studies indicate that organizations are engaged in SSCM to *comply with legal requirements* set by governments (Min and William P. Galle, 2001; Zhu and Sarkis, 2006; Zhu et al., 2008; Tate et al., 2010). Besides external factors, a number of internal factors driving organizations to practise SSCM have been identified. Some organizations for example, are motivated to engage in SSCM in order to *enhance their organizational reputation*, *reduce costs, improve overall performance* and to gain *competitive advantage* (Noori and Chen, 2003; González-Benito and González-Benito, 2005; Nunes and Bennett, 2010; Testa and Iraldo, 2010). Furthermore, organizations may engage in sustainability practices because of *social and ethical responsibilities* for addressing issues and concerns within the community (Andersen and Skjoett-Larsen, 2009; Moore and Manring, 2009). Overall, Ageron et al. (2012) identified the impact of external drivers on the development of SSCM practices is more significant than those internal drivers.

2.3   Organizational adoption motivation: Theoretical perspective

Organizational motivation theory to help explain IS adoption is a relatively new and largely under-used theoretical lens (Molla, 2012). We argue that a motivational perspective could provide useful insights particularly for inter-organizational context as the influence of internal and external stakeholders could help establish adoption motivations (Eklim and Rahim, 2008). As SSCM is concerned with managing the application of a range of sustainable practices within supply chain operations that are fundamentally inter-organizational in nature, we find literature on adoption motivation of inter-organizational systems (IOS) to be relevant for the purpose of our research. We believe it can provide a suitable theoretical foundation to understand SSCM adoption motivations. Although there are many IOS studies (e.g. (Hart and Saunders, 1998; Riggins and Mukhopadhyay, 1999; Kurnia and Johnston, 2000; Teo et al., 2003) assess factors affecting adoption, they do not operationalize the motivation construct specifically. Rahim et al. (2007) is the first known study that systematically operationalizes the construct 'motivation' in context to IOS adoption in terms of 'locus' and 'type' of motivations. In addition, they contend that organizational adoption motivations influence the implementation process, which in turn affect the benefits that the adopting organization can experience as a result of adoption of IOS solutions. At a later stage, Rahim et al. (2011) empirically validated the IOS adoption motivation model

using case studies chosen from two large Australian automotive and pharmaceutical companies and through their findings reinforced the significance of organizational adoption motivation as a predictor to explain variations in IOS implementation process. Drawing on Rahim et al (2007)'s IOS adoption motivation theory, Molla (2012) developed an adoption motivation framework for green IT context. This IOS adoption motivation theory, although is relatively new, it is slowly gaining acceptance among IS scholars to understand the adoption of various technologies (Jagielska et al., 2010; Oseni et al., 2014).

In line with the works of Rahim et al (2007) and Molla (2012) and drawing on the existing empirical findings discussed in Section 2.2, we now propose that for SSCM context organizational adoption motivations too can be understood in terms of two attributes: type of motivation and locus of motivation. Two types of motivation can be observed: economic and socio-political. Likewise, locus of motivation can be internal or external. Drawing on these attributes, for SSCM context we now develop a framework (Table 1) that enables us to differentiate motivations that are driven externally from those driven internally (locus of motivation) as well as to differentiate economic motivations from socio-political motivations (type of motivation). Thus, combining type of motivation and locus of motivation, we can espouse four possible SSCM adoption motivation scenarios: Economic-Internal (Scenario 1), Economic-External (Scenario 2), Socio-Political-Internal (Scenario 3), and Socio-Political-External (Scenario 4).

Economic-Internal (Scenario 1) refers to an SSCM adoption situation in which organizational motivations to make adoption decision arises from an internal stakeholder (e.g. sustainability manager, CEO) and adoption decision is made to either make cost savings or to enhance competitive position. In other words, type of motivation is economic in nature seeking short term financial benefits through cost savings or long-term competitive positioning in the market by creating a barrier (even if temporarily) for the rival companies using IT-enabled SSCM initiatives. Economic-External (Scenario 2) can be observed within an organizational context when the adoption motivation arises from external stakeholders (e.g. investors, customers, government agencies) which if not addressed my create risks that may threaten immediate company benefits (e.g. reduced sales). Socio-Political-Internal (Scenario 3) represents an organizational adoption situation in which the motivation to adopt SSCM practices are conceived by the internal stakeholders of an organization and the intention of adoption decision is to use those practices to improve the image of the organization. Finally, Socio-Political-External (Scenario 4) can be observed when the adoption motivation arises from external stakeholders (e.g. investors, customers, government agencies) that when not properly considered may contribute to establish a negative publicity (image) of the organization.

Type of Motivation	Locus of Motivation	
	Internal	*External*
Economic	Scenario 1 • Cost savings • Performance improvement • Achieve competitive advantage	Scenario 2 • Pressure from consumers/customers • Supply chain risk identification and management • Industry influence
Socio-political	Scenario 3 • Pressure from internal stakeholders • Enhance reputation • Ethical and social responsibility	Scenario 4 • Legislation compliance • Pressure from external stakeholders

Table 1: SSCM adoption motivation framework

As there exists a paucity of studies investigating the SSCM adoption from a motivational perspective, we argue that this study helps advance research effort in the area of SSCM adoption motivations. Using the proposed framework, we can systematically investigate various motivations that drive organizations to adopt SSCM practices. This is a necessary step towards developing a better understanding of SSCM implementation process and benefits expected. This view is consistent with the arguments expressed by (Rahim et al., 2007) for the IOS adoption motivation context. In this paper, we report the preliminary

use of this framework through an in-depth qualitative study. We seek to complement the existing SSCM adoption literature by offering some novel insights into how organizational motivations are established.

3   RESEARCH METHOD

To achieve the aims of the study, an exploratory qualitative research approach was adopted. For data collection technique, we used a combination of interviews and reviews of organizational documentations to allow for in-depth investigations into the current practices of SSCM among organizations and the organizational motivations to adopt (Yin, 2008). Currently, there is very limited empirical work involving qualitative data that has been reported in the scholarly literature describing the phenomenon. We have chosen four organizations of varying sizes to take part in our exploratory case study. Out of these, two are manufacturing companies (i.e. Organizations A and B), one is a local government agency (Organization C) and another is a non-profit organization engaged into promoting sustainability awareness and products in Australia and helps member organizations connect to the relevant parties as part of their SSCM practices. (Organization D). The non-profit organization was included as they have wider access to the SSCM adoption experiences of many companies in Australia, and hence their views included what they think other organizations in Australia are adopting sustainability practices. Therefore, they serve as an extra source for validating the overall observations based on the data obtained from the other three organizations. Table 2 provides a brief description of the participating organizations. The unit of analysis is an individual organization.

Data were gathered from multiple sources, including semi-structured interviews, internal company documents and online published data. The interview protocol includes questions related to SSCM practices, benefits, challenges and roles of IT in supporting SSCM practices. The interview protocol was pilot tested with 2 practitioners to ensure the clarity and relevance of the questions. Semi-structured interviews with the representatives from participating organizations (see Table 2) were conducted to elicit rich in-depth information. Each interview lasted about one hour and was audio recorded and subsequently analyzed. Data analysis employed content analysis and pattern matching logic described by Yin (2003) using various concepts identified from the literature which are related to SSCM practices and adoption motivations.

Organization	Industry	Interviewees	Annual Revenue
A	Steel manufacturing	General Manager	$7.1+ billion
B	Wine production	Corporate Social Responsibility and Vintrepreneur Manager	1.8 billion
C	Municipality (service-oriented)	Procurement and Contracts Manager, Sustainability Manager, Sustainability Team Leader, Finance and Business Coordinator, IT Project Manager.	-
D	Procurement service	Program Manager, Membership Program Manager	-

Table 2: The Participating Organizations

Organization A is Australia's premier manufacturer of steel long products and is a leading metals distribution company in Australia and New Zealand. The company manufactures and distributes a wide range of steel products. It continually addresses the triple bottom line by valuing environmental, social/ethical, and economic aspects across all of its operations. In 2010, it was elected to publish a detailed, stand-alone online sustainability report modelled on the Global Reporting Initiative (GRI) framework in order to better engage with its stakeholders.

Organization B is a leading global company of luxury, premium and commercial wines. It produces more than 50 iconic brands and sells 33 million cases of wine each year. It employs more than 3,500 people across 16 countries. It has several environmental and social principles and programs in place.

Organization C, founded in 1842, oversees one of the capital cities in Australia and a number of its inner suburbs. It has a residential population of almost 100,000 and covers 37.6 km^2 and employs 1300 people. It aims to create sustainable local community precincts within the city. It is a recognized leader in the field of environmental and social sustainability. It seeks to do business with contractors and providers who have similar sustainability objectives and operational policies.

Organization D is a non-profit organization that assists organizations across various industry sectors in implementing sustainable procurement and developing sustainable supply chain. It is located in one of the capital cities in Australia and has members (buyers/clients and suppliers) across Australia. It offers various services to organizations including identifying green products and their suppliers, building standard processes and measuring results.

4 STUDY FINDINGS

4.1 Current status of SSCM practices

In terms of the SSCM initiatives that are currently in practice, their responses varied, depending on the types of business each organization is engaged in. Table 3 synthesizes various SSCM initiatives practised by the study participants. Three of the participating organizations (A, B and C) have been engaged in many SSCM initiatives along the three dimensions of sustainability. All the economic dimension initiatives were consistently practised across these organizations, except for Organization C that was not involved in sales and profit generation. However, Organization C was generally quite advance in its overall sustainability program. It followed the Global Reporting Initiative (GRI) which is an independent program that provides one of the world's most widely used standards for sustainability reporting, to measure, track, report on and compare economic, environmental and social performance.

In terms of the environmental dimension, organizations A-C practiced Green Purchasing to ensure that most of the products purchased were supplied by organizations that were certified from the environmental perspective. Both manufacturing organizations (A and B) practiced Green Distribution that optimized the truckload and delivery routes as well as minimized the number of transits/product handling. Eco-design was practised by Organizations B and C, while Reverse Logistics practise was carried out by Organizations A and C. Organization A, in particular, recycled metals from various products and transformed them into steel products. Notably, Organization B had established an environment risk management program to control the environmental impacts of its business activities. Likewise, Organization C had several environmental programs such as reducing water and energy usage, better managing waste and recycling, trialling cool roofs, green walls and facades, solar panels, green transport, storm water harvesting systems.

For the social dimension, Organizations A-C were quite advanced in practising various initiatives particularly in community relations, work safety and product safety. In addition, organizations A-C generally purchased from disadvantaged (minority) suppliers for addressing equity and provided education to the community as an effort to improve general well-being. Organization C, for example, had introduced social sustainability programs in three key areas namely Community, Safety and People, as well as Customer and Market. Similarly, Organization A had social sustainability programs in areas including community relation, health and safety, while Organization B had established Corporate Social Responsibilities (CSR) scheme and Torres Strait Islanders programs to support the well-being of the community and the minorities.

As a non-profit organization that helps other member organizations with sustainable procurement practices, Organization D ensures that products are designed in such a way that they are environmentally friendly, client (buying) organizations are well connected with suppliers who were GECA (Good Environmental Choice Australia) certified and distribution of products were optimized. Currently, they have 150 GECA certified suppliers in their database system. There could be more certified suppliers available but not all of them were listed on Organization D's website because of listing fees. Member organizations of Organization D can be either client organizations or certified

suppliers that are listed in Organization D database system. All member organizations adopt practices that belong to the economic dimension of sustainability. Organization D has actively helped member organizations to implement various SSCM practices related to environmental and social aspects. In particular, a variety of events were regularly organized to increase the awareness of organizations in Australia regarding the importance of addressing sustainability in supply chain management and ran a number of training events for client organizations in the area of sustainable procurement. People from the minorities of society with disadvantaged backgrounds were also offered opportunities for employment. There are some missing data for a handful of practices related to environmental and social sustainability of Organization D's member organizations.

SSCM Initiatives	Org A	Org B	Org C	Org D*
Economic Dimension				
Analyzing ROI and profit margin	x	x		x
Analyzing cash flow	x	x	x	x
Achieving consumer satisfaction	x	x	x	x
Creating repeat customers	x	x	x	x
Enhancing sales	x	x		x
Quality initiatives	x	x	x	x
Creating competitive advantages	x	x	x	x
Environmental Dimension				
Eco-design of products	x	x	x	x
Green purchasing	x	x	x	x
Clean/lean production (Manufacturing)	x	x	n/a	--
Green distribution/logistics (Transportation)	x	x	x	x
Reverse logistics (waste management) and recycled materials	x	-	x	--
Social Dimension				
Community relations	x	x	x	--
Employee well-being	x		x	x
Human rights		x	x	--
Work safety	x	x	x	x
Ethical considerations		x	x	--
Purchasing from minority-owned suppliers	x		x	x
Product safety	x	x	x	--
Education support	x		x	x

* represents member organizations' SSCM practices
x indicates a SSCM practice is adopted by the relevant organization
- indicates a SSCM practice is not adopted by the relevant organization
-- indicates missing data

Table 3. SSSM Initiatives Practised by the Participating Organizations

4.2   Motivations for implementing SSCM practices

In this section, we present the various adoption motivations that drive the participating organizations in their SSCM implementation based on the proposed framework presented in Table 1. Table 4 summarizes the study findings and details of each SSCM adoption motivation scenario are discussed below.

4.2.1   Economic-Internal Motivation (Scenario 1):

Our data shows very little evidence regarding this motivation scenario. The majority of the participating organizations acknowledge the need to comply with the regulations to reduce carbon

output to avoid tax and to satisfy the environmental reporting requirements, but there is no strong evidence that they engage in SSCM practices because of motivations related to cost savings, performance improvement and achieving competitive advantage. For example, the General Manager of Organization A asserts the following:

"Well it's just to control our carbon output. I mean that's what it's about it. We're taxed on it and the least we produce the better off we are – our carbon dioxide output. But I'm not sure whether we can go anywhere with it I don't know. I just don't think there's anywhere to go".

SSCM Adoption Motivation Scenarios	Org A	Org B	Org C	Org D*
Scenario 1: Economic-Internal				
• Cost savings	x			
• Performance improvement				
• Achieve competitive advantage				
Scenario 2: Economic-External				
• Pressure from consumers/customers		x		
• Risk identification and management	x	x		x
• Industry influence				
Scenario 3: Socio-Political-Internal				
• Pressure from internal stakeholder			x	
• Enhance reputation		x	x	
• Ethical and social responsibility		x	x	x
Scenario 4: Socio-Political-External				
• Legislation compliance		x	x	x
• Pressure from external stakeholders				

* represents typical adoption motivations of member organizations

Table 4. SSCM Adoption Motivations of Participating Organizations

4.2.2 Economic-External Motivation (Scenario 2):

Some of SSCM adoption experiences of Steel manufacturing (Organization A), wine production (Organization B) and typical member organizations of Organization D fall into this scenario. They were concerned with risks associated with their external partners which if not addressed would threaten realisation of their financial achievements. For example, steel production company introduced SSCM practices in response to safety concerns of their customers. Safety is considered by customers to be of paramount significance which if neglected would result in a potential reduction in sales (thus loss of economic benefits). Improvement in safety has also led to a fewer number of accidents and reduced cost of compensations and insurance.

Likewise, the wine production company (Organization B) identified risks in dealing with their suppliers which if not sorted out would dent a hole in the profit margin of the company. This company recognised the need to bring its suppliers in line with their SSCM requirements. This requires the wine company to have understanding of the 'exposure points' of their suppliers. On the matter of the locus of motivation, we note that for organizations A and B, the motive originated from external stakeholders (e.g. customers, suppliers) which created a realisation that their inability to manage risks would have economic implications. This sentiment is expressed by the manager of the wine company (Organization B) as follows:

"Our customers are becoming much more, are increasingly asking us for details on our supply chain practices. And one of the things that I want to do is make sure our business is prepared to respond, but also to get a more documented and thorough understanding of our supply chain".

"And it's also around the risk. So what are the risks in our supply chain? One of the things that I can see happening in the industry is companies might have their own area really well sorted out, but unless their suppliers are in line with that, you have high risk, because you have less control over what they're doing and you don't know necessarily what your exposure points are. So by actually assessing them and getting an understanding of what their exposures are, then you can kind of make a business decision as to whether or not, what the level of risk you'll tolerate"

4.2.3 Socio-political-Internal Motivation (Scenario 3):

Some SSCM adoption experiences of wine production company (Organization B), municipality (Organization C) and typical members of Organization D are classified into this scenario. They contended that their organizations looked at SSCM practices as an opportunity to establish environment caring image in the broader society and as part of exercising their social and ethical responsibilities. This sentiment is expressed below:

"We ourselves as a business have a very strong corporate social responsibility set of principles. One of which is incorporating CSR and social and environmental sustainability through our supply chain; so that in itself is a driver" (Organization B)

"I think [we are] a bit more educated on that, I think because we came a long way and we started earlier than most of the other organizations and it's, again, it's about becoming more system driven and process driven. We did a lot of fantastic work but now it's more about, everybody should just collaborate and we should do it together. And the, from awareness point of view, I think we embrace this whole sustainably culture much better than most other organizations. (Procurement Manager, Organization C)

The Sustainability Manager of Organization C also asserted that they were a leader in sustainability because of the influence of the CEO, as evidenced below:

I think it's just that constant education and constant awareness sort of raising, and the support from the top, because our CEO has been always big on this, and we, this is linked to the vision of [the council]…. and all the business around the council are actually all looking at that big vision and that's what we have, you know, a specific separate branch just to do sustainably stuff. I guess it's really about how much emphasis you put in this area, how much that's driven from the top.

4.2.4 Socio-political-External Motivation (Scenario 4):

Our data shows evidence that most participating organizations (except Organization A) engage in SSCM practices as an effort to comply with government regulations concerning carbon emissions. We have indicated the relevance of this motivation scenario in Table 4. However, for the majority of participating organizations, the government influence is not significant. Most of them (except Organization A) consider themselves as leaders within their industry sector in promoting sustainability practices. Despite the relatively immature legislations in the area of sustainability and reporting requirements, they have been proactively engaging in various SSCM practices. The CSR manager of Organization B reveals her dissatisfaction with the current legislation:

"...to be honest and I don't mind going on record and saying because it is a pain in the neck, when they can't organise themselves and their policies and they keep going backwards and forwards, backwards and forwards, it creates an absolute nightmare for people like me in the company because I then have to try and justify why they're changed ... Honestly it just confuses everybody and it's not, it's counterproductive. I don't believe that they actually care, it's a complete political bandwagon versus some companies who are actually really want to be economical sustainable, but there is a compassion element in there. I don't know that government shares that all the time. And I don't know that I want government to help with this. We kind of like they get involved and they wreck it.

Consistently, the Membership Program Manager of Organization D believes that in Australia, private organizations are the proactive parties in practising SSCM initiatives as revealed below:

"I think [private companies] do lead a bit more in Australia, especially corporations and some are quite strong on their practices, like banks are quite strong. And they have it documented and published and so forth, so that's just my perception. A little bit more innovative".

5 DISCUSSION

The findings of our study indicate that SSCM practices have been practised in Australia by a number of organizations. The study confirms that economic sustainability practices have been the main focus of most organizations, but environmental and social sustainability practices have also been practiced to a certain extent. Our study also indicates that the motivations to engage in SSCM vary across the participating organizations, but in general are consistent with the findings of other studies (e.g. (Min and William P. Galle, 2001; Zhu and Sarkis, 2006; Zhu et al., 2008; Tate et al., 2010)).

Based on our findings related to SSCM adoption motivations of the participating organizations, there are a number of important observations that are worth highlighting. First, the participating organizations demonstrate multiple types of motivations to adopt SSCM practices. For example, wine production company (Organization B) was influenced by two types of motivations: economic (risks threatening economic achievement) and socio-political (reputation and legislation compliance). Likewise, the municipality (Organization C) too reflects economic motive and socio-political motive perceived from internal stakeholders. The typical motivations of member organizations of Organization D also confirm the observation that organizations actively engage in SSCM can be driven by multiple motivations, as shown in Table 4. However, no dominance of a particular type of motivation (i.e. economic or socio-political) is observed. This particular aspect is in line with the views of Molla (2012) who too acknowledge that different motivations for adoption green IT do not work in isolation and they may have interaction effects on adoption decisions.

Second, drawing on the adoption experiences of the participating organizations, the existence of all four motivation scenarios (discussed in Section 2) can be confirmed. This is clearly indicated in Table 4. Economic-Internal motivation (Scenario 1) is represented by the SSCM adoption experiences of steel manufacturing company (Organization A) to a limited extent. Likewise, Economic-External motivation (Scenario 2) is represented by steel manufacturing (Organization A), wine production companies (Organization B) and typical members of Organization D. The remaining two scenarios (Socio-political-internal and Socio-political external) are both supported by the experiences of the wine company (Organization B), municipality (Organization C) and typical members of Organization D. Since the existing studies regarding SSCM adoption motivations are still fragmented (Reuter, Foerstl et al. 2010; Nunes and Bennett 2010; Eltayeb, Zailani et al. 2011; Molla 2012), this particular finding helps guide future studies in systematically exploring and understanding the different types of motivation for SSCM adoption as well as the impacts.

Third, it is possible to classify SSCM adoption experiences of an organization into different motivation scenarios. For instance, the SSCM adoption experience of the steel company (Organization A) represents Economic-Internal, Economic-External motivation scenarios, while that of the municipality (Organization B) falls into three scenarios (i.e. Economic-External, Socio-political Internal and Socio-political-External). A plausible explanation for this is that organizations may introduce some SSCM practices due to the influence arising from external sources. However, for another set of SSCM practices the same organization may conceive motivations from internal sources. In a similar fashion, adoption of some SSCM practices may be prompted by economic needs, while other practices may be more influenced by socio-political aspirations of the organization. This particular assertion however needs further exploration in future studies.

Another interesting observation is that those participating organizations that consider themselves as leaders in promoting sustainability within their industry sector (Organizations B and C) do not seem to be motivated by internal economic drivers. The main motivations appear to fall in the Socio-political internal scenario. The motivations are particularly related to exerting ethical and social responsibility and enhancing reputation. On the other hand, Organization A that has engaged in sustainability

practices but does not consider itself as a leader within the industry is mainly motivated by the economic drivers, either internal or external. Finally, two motivations which include industry influence and pressure from external stakeholders are not evident in our study. This observation confirms the fact SSCM practices are relatively new in the Australian context and only a few organizations are currently engaged in these practices. Thus, the situation in Australia appears to be rather different than in other countries such as Europe in which organizations feel pressured by the government and other regulatory authority to engage in sustainability practices (Gavrilovska et al. 2013). However, as the adoption is becoming more widespread in Australia, we expect to observe some industry influence and pressure from external stakeholders as adopting organizations exert pressure on their trading partners to adopt the practices. Thus, the phenomenon observed in the adoption of previous inter-organizational system such Electronic Data Interchange, Efficient Consumer Response and other initiatives (Iacovou et al., 1995; Kurnia, 2006; Kurnia and Peng, 2010) is expected to occur in the SSCM adoption context.

6 CONCLUSION

In summary, our study has provided a modest contribution towards a better understanding of SSCM adoption motivations and in directing future research in this area. The proposed framework has been useful to systematically guide the exploration of different motivations that drive Australian organizations in implementing SSCM practices. Drawing on the study findings, we find the evidence that no single type of motivation alone has shaped the decision of the organizations to adopt SSCM practices. A mix of economic and socio-political motivations originating from internal and external sources together act on organizational intentions to adopt SSCM practices. We did not find any evidence to establish the priority of one particular type of motive over another. This finding however could have been different if we had a larger pool of participating organizations of varying sizes and industry segments. Despite this, we claim that no one (to the best of our knowledge) has attempted to systematically examine the SSCM adoption phenomenon from organizational motivational perspective using a theoretical framework. Our work, although preliminary, reported in this paper is an exception and should be treated as an initial step towards designing a more rigorous and comprehensive study at a later stage.

In the future studies, we will investigate if there are certain patterns of benefits that can be expected from different adoption motivation scenarios. In addition, further investigations involving a large scale survey are required to determine if there exists a statistically significant difference between the influence of economic motive and socio-political motive on organizations' decisions to adopt SSCM practices. Additional studies could also be conducted to find out whether those four SSCM adoption motivation scenarios indicated in Table 1 are equally distributed in the public and private sectors. Likewise, whether a particular type of scenario dominates within the SME sector needs to be examined as well. Future studies can also investigate how different motivations may lead to different organizational behaviours in SSMC practices or how motivations affect the ways SSCM initiatives are practised by organizations and their trading partners. Finally, a possible direction along which the notion of 'SSCM adoption motivation' concept can be extended involves the consideration of 'motivation intensity' that refers to the extent an organization demonstrates the existence of a particular type of adoption motivation. We advocate the use of an interval scale (where 1 means extremely low, 2 means low, 3 means moderate, 4 means high, and 5 means very high) to measure the degree of motivation intensity. We argue that an organization which is prompted by multiple types of motivations to adopt SSCM practices may differ in its intensity for each type of motivation, based on which a motivation intensity matrix can be built. Studies are also needed to examine the potential impact of such a motivation intensity matrix on SSCM adoption decision making process. All these future studies will contribute to both theory and practice and will eventually help increase the widespread adoption of SSCM initiatives across the globe.

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