Knowledge Sharing With Contingent Workers

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Abstract
Since the 1990s there has been a tremendous growth in the number of short-term contracts between employees and employers around the world in all kinds of levels of skills and sectors. This is also the case for the knowledge based sector. Knowledge based organisations tend to hire high-skilled contingent workers to work on certain projects. It is stated that contingent workers from outside the organisation can be highly valuable considering knowledge sharing and creation, which is highly important for organisations to sustain competitive advantage. However, because of the short-term contracts it seems often more challenging for organisations to ensure adequate knowledge donation from contingent workers and knowledge sharing between permanent workers and contingent workers. Many scholars have provided knowledge sharing frameworks, however most of them assume a workforce containing permanent workers only. It seems that there is hardly literature suggesting how to manage knowledge sharing when contingent workers are integrated to the workforce. This paper examines what the extra challenges and differences could be in managing knowledge sharing within a mixed workforce and provides suggestions on what research still has to be conducted in order to make it possible to build a knowledge sharing framework that takes into account the extra challenges and differences involved with the integration of continent workers to the workforce. These challenges and differences lie on knowledge sharing factors from the individual perspective which are: self-efficacy, commitment, and trust for both contingent workers and permanent workers, as well as contingent worker's perceived relative advantage and differences in levels of experience between contingent and permanent workers.

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1. Introduction

1.1 Temporary employment trend

Temporary relationships between organisation and employees have become more and more a common form of employment around the world these days. In Europe, the United States, Canada and many parts of Asia, the number of non-standard employment contracts has been enlarged (Quinlan & Bohle, 2004). To define non-standard work arrangements, it is helpful to first provide a definition of what standard work arrangements entail. Kalleberg (2000, p.341) states that between the years 1900-2000 for most workers, the standard work arrangement implied employment that was a full time job, continued indefinitely, and performed at the "employer's office or at least under the employer's supervision". Also, standard work arrangements were everlasting and secure following Felstead and Jewson (1999). Focussing on the second element of Kalleberg's (2000) definition (continued indefinitely), this is fading away. According to Burgess and Connell (2006), throughout the 1990s temporary work arrangements were the most accelerating form of non-standard work arrangements in the European Union and in Australia. In addition, Carré (2000) states that the temporary worker trend gained much publicity during the 1990s. In 2012 an estimation of American workers with a fixed-term contract was one-third and it is currently still growing (O'Neill, 2014). Furthermore, O'Neill (2014) claims estimations have been made that besides traditional freelance sectors as entertainment and media, the trend of temporary worker will affect jobs in engineering, architecture, healthcare, accounting, law, academia and sales as well. Considering the current employee careers, Hall (2002) speaks of dynamic organisational careers, meaning that an individual hops from job to job. Even claims have been made that the traditional career is dead or dying (Peel & Inkson, 2004).

Temporary workers can be defined as contingent workers, which Polivka and Nardone (1989, p.11) define as "any job in which an individual does not have an explicit or implicit contract for long-term employment or one in which the minimum hours worked can vary in a non-systematic manner". In addition, Bendapudi et al. (2003) state that an employee can be defined as a contingent worker if the employment duration is estimated to be less than a year.

There exists a differentiable aspect among contingent workers between high-skilled and low skilled, whereas the high-skilled contingent workers particular are used to remedy skill shortages within an organisation (mostly direct contractors) and lower-skilled or less experienced contingent workers are used as "reserve" to cover for the fluctuations in labour demand (Burgess & Connell 2006). Following on this distinction, Hipple and Stewart (1996) point out that there are dual labour market theories suggesting a distinction between "bad" jobs and "good" jobs considering loan, employment conditions and benefits. Developing and supplying own skills and knowledge to client organisations seems more achievable for contingent workers who possess skills and knowledge as well as experience and labour market power (Peel & Inskon, 2004). Hence, high-skilled contingent workers are more likely to be employed in a "good" job, while low-skilled contingent workers are more likely to end up in a "bad" job.

Another distinction in contingent workers to mention is about free choice and forced choice. According to Nunez and Livanos (2015) there is a segmented structure in voluntary temporary employment. The first segment contains young workers who prefer to be a contingent worker to gain experience, reveal motivation and skills or to realize contractual flexibility. This group can be called temporaries "by choice"**.** The second group are workers who are keen to accept a temporary contract as they are unable to find a permanent one and can be characterised as "precarious". Also De Cuyper and De Witte (2008) claim that a distinction between free choice and forced choice exists, whereas they state that some of the forced contingent workers accept temporary contract hoping to get a permanent one.

1.2 Driving forces of the temporary worker trend

Golden and Appelbaum (1999) suggest that there is a conventional statement explaining the growth in temporary working based on a change in labour force composition towards contingent worker by choice. Other theories explain the growth of temporary contracts by stressing the demand side of organisations.

1.2.1 Employee's driving factors

Following on the statement mentioned by Golden and Appelbaum (1999), what are the reasons for contingent workers by choice that drives them to have temporary relationships whit organisations over and over?

Peel and Inskon (2004) found five particular reasons that could influence workers to choose temporary employment, which are aligned with other findings in literature. The first reason they name is "increased autonomy"; The ability to unsupervised, self-manage workplace and -time and having own work control are often considered as key benefits. This is aligned with the findings of Ellinson et al. (1998) who claim that sense of freedom and flexible hours are often perceived as benefits by contingent workers.

The second reason they mention is "earning maximization"; contracting could eventually, through individual enterprise, deliver higher earnings compared with permanent jobs. Or as Tan and Tan (2002) state, a temporary job allows one to earn some extra money without having to give up other time consuming activities.

The third reason stated by Peel and Inskon (2004) is "personal development"; by work experience, contingent workers are able to gain knowledge and skills that can strengthen their labour market position. Improving skills is more often considered in literature as a motivator to contingent working (e.g. De Cuyper and De Witte, 2008; Tan & Tan, 2002).

The fourth reason they mention is: "challenge variety"; the variety and change in challenges seems to be an attractive motivator for contingent workers, also named by (Ellinson et al., 1998).

The last reason Peel and Inkson (2004) mention is "freedom"; meaning that as opposed of a permanent worker, a contingent worker is free from the sometimes oppressive organisational politics.

1.2.2 Organisational driving factors

According to Burgess and Connell (2006) the demand of user firms to contingent workers has been one of the causes of the increase in temporary working. The trend among organisations to provide temporary functions instead of permanent ones started around 1985 (Uzzi & Barsness, 1998). Burgess and Connell (2006) state that the provided flexibility of the contingent workers is the most often mentioned reason for user firms. For instance Cardon (2003) claims that the flexibility of contingent workers can be beneficial for organisations. Furthermore, Burgess and Connell (2006) state that reasons for utilising contingent workers instead of permanent workers are varied and get derived from short-term and ad hoc strategies as well as long-term strategies. One of the reasons they mention for hiring contingent workers is the traditional role of filling general (short-term) labour shortages. Because of their flexibility, contingent workers are useful for that role.

Considering organisations within the knowledge-based economy, their main reason to hire contingent workers is to fill skill shortages (Burgess & Connell, 2006), or to gain new knowledge (Cardon, 2003). At first, especially low-skilled employees where contracted as contingent worker but already around the 1990s, high-skilled contingent workers became more likely to be found in the professional and technical occupations (Hipple & Stewart, 1996). Also Ang and Slaughter (2001) claim that the use of independent contractors to work with permanent professionals has significantly grown in information technology and other knowledge-based sectors. As Connelly and Gallagher

(2004, p.971) state: “While cost and flexibility are important considerations, some firms engage the services of contingent workers in order to benefit from their specialised knowledge.” They point out that such a contingent worker may perform a task separated from the core workforce when an organisational client provides a task that requires more general skills. However, they state that it could be required that a contingent worker has to work side-by-side with the core workforce when “non-adaptable” technologies are applied.

1.3 Problem Statement

In general, there remains a detachment between organisation and temporary worker (Burgess & Connell, 2006), which could cause restrictions for the collaboration. Regarding knowledge-based organisations which tend to hire contingent workers to create new knowledge, a more specific issue to mention here is knowledge sharing. A study of Nesheim and Hunskaar (2015) showed that external consultants –a form of contingent workers because of their short-term relationships with client organisations- are less engaged in knowledge sharing towards internal employees, compared with internal employees to other internal employees. Also internal employees tend to be less engaged in knowledge sharing towards external consultants, compared with external consultants to other external consultants. Trust in this issue seemed to be statically related to knowledge sharing behaviour. There could be some trust issues from both sides. Since contingent workers visit multiple organisations within a certain timeframe, permanent workers may be restraint in sharing knowledge with contingent workers because they are afraid that contingent workers will leak valuable knowledge (Connelly & Gallagher, 2004). Contingent workers may be restraint in sharing knowledge as well. Considering job security, contingent may avoid sharing valuable knowledge, hoping that their services are longer needed for a particular client (Connelly & Gallagher, 2004). In addition, Connelly and Gallagher (2004) mention that even though a contingent worker is willing to share valuable knowledge it is not necessarily valued because “non-official” members may face complications in establishing their credibility among permanent workers.

As stated, the amount of contingent workers in the knowledge based sector has grown. According to Matusik and Hill (1998) evidence shows that contingent workers are more and more often used on important projects such as development of products or information systems. They state that the organisational reasons for hiring high-skilled contingent knowledge workers are to enhance knowledge creation or to enhance the implementation of existing knowledge. Nevertheless, given that temporary relationships between high-skilled contingent workers and organisations within the knowledge-based economy have become more common these days and will continue to grow, and acknowledging that knowledge sharing between contingent workers and permanent workers has its potential limitations, this could be problematic for organisations in many different aspects.

Knowledge is namely being considered as the most important resource of organisations these days (Ipe, 2003). Ipe (2003) claims that knowledge has always been of great importance for organisations, but only in the last decade it has been regarded as the primary key of competitive advantage and a requirement for long-term sustainability and success. As Ipe (2003, p.337) states: “processes that facilitate the creation, sharing, and leveraging of individual and collective knowledge” are of high importance for organisations but still much has to be learned and understood how this should be done. The knowledge sharing issues between contingent workers and permanent workers takes initially place on individual level . Notwithstanding as Ipe (2003, p.340) states: “the sharing of individual knowledge is imperative to the creation, dissemination, and management of knowledge at all other levels within an organisation”. Therefore limitations in knowledge sharing with contingent workers could eventually lead to restrictions in realising and sustaining competitive advantage.

The problem is that even though organisations add contingent workers more and more often to the workforce and this often seems to be challenging to manage, the majority of the existing behavioural theories such as knowledge sharing frameworks are still grounded on “standard” work arrangements (Connely & Gallagher, 2004), for instance the conceptual framework on knowledge sharing in organisations by Ipe (2003). Therefore it is questionable if the current literature on knowledge sharing is applicable enough for organisations in the knowledge-based economy. As Connelly and Gallagher (2004) argue, building literature on managing relationships with contingent workers is of practical value to organisations that consider to involve contingent workers in the workforce, currently uses them or extends the amount of contingent workers. This would also apply to literature on managing knowledge sharing.

1.4 Aim of Study

It follows that there seems to be room for a literature study aiming on knowledge sharing within organisations with high skilled contingent workers “by choice”. Hence, this study would be in favour of organisations active within the knowledge-based economy. Note that this study neglects recruitment issues, an component that should be adequate before one should be interested in the issue on the actual process of knowledge sharing after a contingent worker is hired.
Based on the problem statement, the following research purpose and research questions are formed.

1.4.1 Purpose

The purpose of this literature study is to contribute to the creation of applicable and useful literature for organisations active in the knowledge-based economy by examining what already is covered in literature on knowledge sharing with contingent workers and what research still should be conducted.

1.4.2 Research Questions

To what extent does the existing literature on knowledge sharing addresses the organisational issue of knowledge sharing with contingent workers?

1. To what extent can contingent workers be valuable for organisations considering knowledge building
2. Which determining factors for knowledge sharing with permanent workers within an organisation are important according to literature?
3. How would determining factors for knowledge sharing with contingent workers differ from determining factors for knowledge sharing with permanent workers?
4. To what extent provides the existing literature suggestions on how to manage knowledge sharing with contingent workers?

1.5 Method

To answer these research questions this paper applied an literature review. The most frequent used database is google scholar. The usability of literature is judged based on: -the amount of cited by others, and –which references were applied. The search terms were as follows:

Question 1: -Information and Knowledge, -Defining Knowledge, -Organisational Resources and Competitive Advantage, -Knowledge and Competitive advantage, -Importance of Knowledge Sharing, -Value of Contingent Workers in Knowledge Creation

Question 2: -Knowledge Sharing Factors, Knowledge Sharing Contributors, Knowledge Sharing Barriers, -Individual Factors Knowledge Sharing, -Organisational Factor Knowledge Sharing, -Information Technology and Knowledge Sharing, -Leadership and Knowledge Sharing, -Organisational Culture and Knowledge, -Knowledge Sharing Strategies

Question 3: -Contingent Workers and HRM Challenges, -Integrating Contingent Workers, -Contingent Workers and Self-Efficacy, -Contingent Workers and Commitment/greed, -Contingent Workers and Trust/distrust, -Contingent Workers and Perceived Relative Advantage/Disadvantage

Question 4: -Recruiting Strategies Contingent Workers, -Enhancing Contingent Worker's Job Performance, -Managing Knowledge Sharing with Contingent Workers, -Strategies for Knowledge Sharing with Contingent

2. The Value of Contingent Workers in Knowledge Creation

To state how contingent workers can be valuable in knowledge creation, it has to be clear what knowledge precisely means, what the general value of knowledge for organisations is and why individuals are important in knowledge building.

2.1 Defining Knowledge

Sometimes the definition of "knowledge" gets confused with the definition of "information". In previous studies, these two definitions are used interchangeably (Wang & Noe, 2010) as well as the definition on knowledge management and information management activities (Beesly & Cooper, 2008). Although knowledge is related to information and its communication, it is different from information only (Hendriks, 1999). According to Hendriks (1999), as opposed to information only, knowledge cannot be passed around freely but it calls for learning and reconstruction. Also McDermott (1999) claims there is a distinction between knowledge and information in a manner of information only being a part of knowledge. McDermott (1999) explains this distinction by means of several specific knowledge characteristics. The first important knowledge characteristic to mention is that knowing is a human act. It starts with data and information but it takes a human being to transform it into knowledge. Another characteristic of knowledge McDermott (1999) mentions is it requires thinking to make information useful and convert it to knowledge, which also is of course a human act. McDermott (1999, p.106) explains this process by jamming jazz musicians who: "take in information, make sense of it, generate new musical ideas, and apply their insights to the ongoing musical conversation". This example of the process of converting information into knowledge in the musical context can of course also be translated to the organisational context. To understand how the process of converting information into knowledge works in the organisational context, Choo (1996) developed an organisational knowledge cycle. First information has to be interpreted, conversed and processed. Then the organisation can follow the steps of sense making, which implies that employees give meaning to events happening in the organisation and in the environment, and knowledge creation which requires a collection of individual's knowledge such that is usable to improve organisational performance. Following on those steps, the organisation has to make decisions based on the created knowledge in order to undertake organisational action (Choo, 1996). Besides information, experience is also an aspect that can be translated into knowledge (McDermott, 1999). As Beesly and Cooper (2008) stated, knowledge only occurs through thinking and reasoning or experience because it is embedded within individuals. They explain that from this perspective a distinction can be made between data and information –which are objects- and knowledge,which could be considered as an activity. Many researchers seem to agree on the statement that information is only a part in knowledge creation. Based on literature, a suitable definition on knowledge would be: *"information that is obtained and interpreted by human beings and thereby applicable to new contexts".*

Besides the general understanding on the meaning of knowledge, there are a few distinctions that can be made in different kinds of knowledge. Distinguishable kinds of knowledge are: individual- versus collective knowledge, tacit- versus explicit knowledge and private- versus public knowledge (Matusik & Hill, 1998). Matusik and Hill (1998) define the difference in individual- versus collective knowledge by stating that individual knowledge contains personal information and competencies, whereas collective knowledge can be considered as organisational knowledge on goals and missions and how to deal with competitors and relationships, which can be obtained by collecting individual's knowledge. Knowledge that is difficult to communicate and requires learning and experience is called tacit knowledge, whereas explicit knowledge is more suitable to communicate (Matusik & Hill, 1998; Beesly & Cooper, 2008). Regarding to private- versus public knowledge, Matusik & Hill (1998) mention that private knowledge is held inside an organisation such that outsiders don't have access to that particular knowledge, as opposed to public knowledge which is available for every organisation in the external environment.

To sum up, knowledge is more than information only, it is about data that is made applicable to new contexts by human beings who have made sense of it. Furthermore, the creation of private organisational knowledge often arises at the level of the individual.

2.2 Organisational value of knowledge

Multiple scientists seem to agree on the statement that an organisation has to possess resources that are valuable, as well as inimitable and unique to realize competitive advantage (e.g: Barney, 1991; Hall 1993; Peteraf, 1993;). According to Argote & Ingram (2000) studies until the 1990s that explain competitive advantages mainly on positioning in an industry or the development of organisational assets (such as Porter (1980)) have been put into perspective by studies after the 1990s that also integrate organisational knowledge perspectives. Knowledge seems to have the potential to fit the aspects of being valuable, inimitable and unique, which makes knowledge a potential source for competitive advantage (Matusik & Hill, 1998), and therefore knowledge should in turn lead to organisational economic advantages (Hendriks, 1999). Following Carmeli et al. (2013), intangible assets are more and more important in the growing knowledge-based economy. They state that knowledge sources are the key to creativity and innovation which is required to sustain competitive advantage. Also Beesly & Cooper (2008) state that intellectual assets and innovation, which Luecke and Katz (2003, p. 2) define as: "the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services" are key to generate economic value in today's knowledge-based economy. Even for leading organisations it is necessary to continually extend their knowledge since many competitors are able to facilitate imitations fast (Matusik & Hill, 1998). Considering private- and public knowledge, an organisation could have competitive advantage when it possess private knowledge since other companies wouldn't have access to that particular knowledge in comparison with public knowledge, where an organisation has to be the best applier of that particular knowledge to realise competitive advantage (Matusik & Hill, 1998). According to Suppiah and Singh Sandhu (2011) tacit knowledge is difficult to formulate and to share and therefor more challenging to manage than explicit knowledge but for the same reason tacit knowledge is more likely to become valuable private knowledge. Given that knowledge can be valuable for organisations in sustaining competitive advantage and innovation, this aspect should be added to the earlier mentioned definition. Following, in this literature study knowledge is regarded as: *"information that is obtained and interpreted by human beings and thereby applicable to new contexts in order to create opportunities to push organisational boundaries".*

2.3 Importance of knowledge sharing

Since knowledge is such an important organisational resource that facilitates creativity and innovation and therefore competitive advantage, managers are eager to pay attention to knowledge sharing processes (Carmeli et al., 2013). However, Beesly and Cooper (2008) suggest that knowledge management –which they define as a balance between organisational, technological, social and individual factors- fails in organisations that over-emphasise the technological factors and thereby paying insufficient attention towards the human aspects in knowledge management. As mentioned earlier, Ipe (2003) assumes that knowledge sharing starts at the individual level before other organisational levels can apply the particular knowledge. Ipe (2003) states that instead of literature aiming at information technology, the relationships between individuals is now being recognised as a highly determining factor in the performance of organisational knowledge management. More literature seems to agree on this reasoning. For instance, Hendriks (1999) claims that knowledge resides on the individual level within an organisation, and when shared properly to the organisational level it can attain its competitive value. Hendriks (1999) describes knowledge sharing as an interaction between at least two parties, whereas one party possesses knowledge that needs to be communicated while the other party has to make sense of it. Carmeli et al. (2013) suggest that the sharing of knowledge is crucial since it enables employees to think outside the box and be creative in order to develop new platforms for products and services. Employees would be able to do so since individuals are able to modify existing knowledge and apply it to new contexts (Allen, 1977). Also Argote and Ingram (2000) state that – in particular tacit knowledge- is settled in individual employees, which would suggest that it is of high importance for an organisation to ensure individual knowledge gets shared.

There has to be noted that there are two possible purposes for individual knowledge sharing. One purpose is to become the best applier of existing public knowledge on a particular project. The other purpose is to create new private knowledge, when individuals deliberate on their individual knowledge and combine it.

2.4 The Added Value of Contingent Workers in The Knowledge Sharing Process.

According to Argrote & Ingram (2000) moving employees through different divisions within the organisation is often considered as an influential method in facilitating knowledge sharing. They state that employees from different organisational divisions can learn from each other since they are able to communicate tacit as well as explicit knowledge and employees are also able to apply the gained knowledge to new contexts, which often would be required when knowledge is gained from another organisational division. As an individual, sharing knowledge with employees with other divisions could give new insights and help an individual to think outside the box. Employees from other divisions could namely face certain problems or aspects from another perspective (Argrote & Ingram, 2000).

If employees from different divisions within an organisation can inspire each other to think out of the box, this certainly should be the case when knowledge is shared between employees from within an organisation with employees from outside an organisation. This would be possible with the integration of contingent workers to the workforce. According to Matusik and Hill (1998) contingent workers are very useful for organisations in creating new and unique –and therefor private- knowledge together with permanent workers within the organisation. They explain that this is the case by stating that contingent workers can help in stimulating exploration (developing new ideas and trying new approaches outside an organisation standards procedures, which is very important for continuously building knowledge) because their thinking patrons might differ from employees within the organisation. Contingent workers are namely never held back from those particular organisational standard procedures before they enter a particular organisation. In addition, contingent workers are often trained to apply knowledge to new contexts since they face multiple organisations within a short time and work on new cases over and over again. Hurst and MacDougall (2005) confirm the statement that high-skilled contingent workers can be of added value in knowledge creation within an organisation. They state that cooperation with contingent workers has a positive effect on creative stimuli, expertise and knowledge bank development, which in turn would have a bottom-line impact through product and process improvements and innovations as well as operational efficiencies.

Besides creating new private knowledge, Matusik and Hill (1998) suggest that contingent workers are very useful in helping an organisation to be the best applier of public knowledge. They state that this would be because contingent workers get exposed to many different organisations and therefore have the opportunity to practice a lot with public knowledge as opposed to permanent workers. In addition they suggest that market pressures of staying attractive for organisations influence contingent workers to stay high-skilled in applying public knowledge.

Hence, to answer the question in what way contingent workers can be valuable in building, contingent workers are trained to help organisations to become the best applier of public knowledge on a particular project and to create new private knowledge by encountering particular problems from another perspective because they gain experience from a lot different organisations and contexts.

3. Determining Factors For Knowledge Sharing Within an Organisation

Considering Herzberg's two-factor theory (1966), there are so called "hygiene" factors that only form a barrier in job-satisfaction when present, but cannot contribute in an opposite way, and there are factors that contribute to job-satisfaction but when absent they do not affect job satisfaction negatively, which Herzberg calls "motivators". Such factors also seem to exist for knowledge sharing. Reviewing literature on determining factors for knowledge sharing, it seems that a lot of different factors are mentioned by scholars. However, a lot of the mentioned factors seem to be related one way or another.

Much researchers aim at factors that contribute to knowledge sharing (e.g Ismail Al-Alawi et al., 2007 ; Lin et al., 2009) whereas other researchers stress barriers that impede knowledge sharing (e.g Riege, 2005; McDermott & O'Dell, 2001). For many aspects, it seems that they can turn out both as contributing factors as well as barriers. However, much studies seem to highlight only one side of such an aspect. Other aspects don't necessarily contain two direct opposite outcomes, such as the Herzberg's factors. It seems important for organisations to know in what way certain aspects can contribute to knowledge sharing but an organisation should also understand how the same or other aspects can turn into barriers. Therefore this study handles a distinction between contributors and barriers and confronts them with each other.

Another noticeable difference in perspective in literature on factors for knowledge sharing is stressing factors from an organisational perspective (e.g Suppiah & Singh Sandhu 2011; Xue et al., 2011) and stressing factors from an individual perspective (e.g Ardichvili et al., 2003; Levin et al., 2002). Notwithstanding, a lot of individual factors seem to be related to organisational factors, meaning that organisations could –for a part- influence individual factors by managing the controllable factors on organisational level. To implement decent working knowledge management strategies, one should understand individual's beliefs towards knowledge sharing. As Lin (2007) stated, many knowledge management strategies have failed because they did not support employee's motivations and desires. To build sufficient knowledge sharing strategies it seems required to approach particular aspects from both the organisational and individual perspectives. Therefore both perspectives are clarified in this study.

Combining the perspective difference of contributing factors versus barriers with the perspective difference of organisational versus individual, a matrix with four combinations can be formed. The purpose of this matrix is to provide a clear overview on the different varied factors for knowledge sharing mentioned in literature and to describe their interrelationships. This might help explaining important differences in knowledge sharing with contingent workers instead of with permanent workers that organisations should take in consideration. For contingent workers some factors might differ from those for permanent workers, or some factors could be more challenging compared to factors for knowledge sharing with permanent workers. To understand these differences, first an overview must be given on factors for knowledge sharing in general, that is for permanent workers. Knowledge management is regarded to have a "hard" and a "soft" side existing of data management on one hand and rather social management on the other hand (Van den Hooff & De Ridder, 2004). First information technology will briefly be discussed to stress why the social side of knowledge management is so important. Afterwards, the focus of this chapter will therefore lie on the social side of knowledge management.

3.1 Information technology

As it has changed the nature of work with its technical advantages (O'Neill, 2014) organisations seem to increasingly invest in information technology (Cabrera et al., 2006). It is regarded to be an important resource for organisations as well as countries as a whole in realising economic competitive advantage (Oliveira & Martins, 2011). Oliveira and Martins (2011) state there is a consensus that information technology contributes to the organisation's productivity. Also considering knowledge sharing, information technology has gained popularity among organisations. As Cabrera et al. (2006) stated, in practise information technology seems to be utilized as the main source within organisations, given that the general likelihood of knowledge sharing projects being led by an IT department is five times bigger than that it would be led by a human resource department. According to Cabrera et al. (2006) information technology helps human beings with data collection and storage, which is an requirement in gaining knowledge and creating new knowledge, as information was described as being an part of knowledge. Although knowledge creation requires human action, information collecting and sharing is imperative to analysing data and transforming that into knowledge. Also Hendriks (1999) suggests that information technology is an important factor in knowledge sharing by stating that it not only improves access to knowledge, but that it also lowers temporal and spatial barriers between employees.

Several empirical studies show a positive relationship between the use of information systems and the amount of valuable knowledge shared. For instance, Choi et al. (2010) found that IT support can improve team performances and thereby also knowledge sharing. There appear to be more studies that agree on this statement (e.g Sher & Lee, 2004; Davison et al., 2013). Also Lin et al. (2009) concluded that sufficient use of information systems –meaning that the technology infrastructure and knowledge networks as well as the data utilization have to be sufficient- affects knowledge sharing positively. Nevertheless, considering the relative importance of the dimension of information technology against other social dimensions towards knowledge sharing, their study showed that information technology had relatively the lowest score, followed by leadership, employee's motivation and corporate culture as most important dimension.

Other studies question the statement of a direct positive relationship between the presence of information technology and the amount of knowledge shared. A study from Kim and Lee (2006) showed that the knowledge sharing capabilities were positively affected by employee's usage of information systems and user-friendly IT systems, a statement that more scholars seem to agree on. However, affecting knowledge sharing capabilities doesn't necessarily suggest that knowledge sharing on itself would be positively affected. For instance, Van Den Hooff and De Ridder (2004) didn't find a direct positive relationship between the usage of information technology and knowledge sharing in their study. Notwithstanding, they suggest that knowledge sharing would be indirectly influenced by information technology because information technology would affect employees commitment which in turn would affect employee's motivation for knowledge sharing positively.

As opposed to the studies suggesting a direct or at least an indirect relationship between the existence of information systems within an organisation and knowledge sharing, there are studies that have other statements on the role of information systems in knowledge sharing. There are namely studies that simply didn't find a direct or indirect relationship between information systems and knowledge sharing (e.g. Lin & Lee, 2006). A lot of researchers suggest that this is because although information systems can provide more convenience in knowledge sharing, it cannot contribute to knowledge sharing on its own. Some studies explain this by stressing the characteristics of knowledge and what it takes to create it compared with what information technology can provide. As McDermott (1999) states, knowledge sharing depends more on community building than on information technology. According to McDermott (1999) this wouldn't per se be because employees are reluctant in using information technology, but rather because a lot of knowledge that has to be shared is difficult to document and requires human interaction to understand and to apply. Also Issa and Haddad (2008) state that not all knowledge types can be shared with information systems only. In addition, Hislop (2002) also suggests that the role of information technology in knowledge sharing can be somewhat restricted. Hislop (2002) explains this statement by stressing the nature of knowledge itself and thereby stating that all knowledge has both explicit and tacit aspects and that namely tacit knowledge requires much more than data only. This is aligned with how other researchers distinguish knowledge from information as mentioned earlier. This would mean that information systems are helpful tools in collecting and sharing data but also are restricted to that, and therefore information systems only are not enough to realise adequate knowledge sharing and knowledge building, which requires more than data only. Another explanation on why information only does not ensure that valuable knowledge gets shared in literature is because it requires also employees that are motivated to do so. Issa and Haddad (2008) found that although information technology assists, it doesn't necessarily motivate employees to actually share their knowledge. Hence, even though information systems are present, employees do not automatically use them. This is aligned with the findings of Cabrera et al. (2006). They state that although information systems can facilitate knowledge flows within organisations, it is not guaranteed that they are being used because of lack of people's motivations. As they mention, a citation of Davenport and Prusak (1998, pp. 141-2) gives a clear description on this issue which is: "Technology alone won't make a person with expertise share with others. Technology alone won't get an employee who is uninterested in seeking knowledge to hop onto a keyboard and searching or browsing". Ardichvili et al. (2003) even claim that a lot of employees who are reluctant to utilize information systems for knowledge sharing can still be willing to share knowledge during informal interaction.

Besides the discussion on to what extent information technology contributes to knowledge sharing, other evidence shows that insufficient use of information technology rather forms a barrier for knowledge sharing as opposed to being a contributor when it is used sufficiently. Riege (2005) describes information technology as a facilitator that makes knowledge sharing easier and more efficient but its insufficient use can however form a barrier in knowledge sharing even when employees possess it and would be willing to share it. Insufficient use of information technology can be caused by lacks in the system itself, or a mismatch between employee's goals and expectations, familiarity and experience with and understanding of those information systems (Riege, 2005). Also, as opposed to the benefits of information technology on lowering temporal and spatial barriers mentioned by Hendriks (1999), information technology can therefore also cause a lack of interaction between employees while that is also required for knowledge sharing and creation (Ardichvili et al., 2003).

Build on literature, information technology might be considered as a "hygiene" factor towards knowledge sharing. Insufficient use of information technology may lead to barriers in knowledge sharing and although information technology can make knowledge sharing more convenient and efficient, its contribution on its own to knowledge sharing apart from employee's knowledge sharing abilities and intentions, is called into question.

3.2 Organisational Culture and Leadership

Besides knowing which individual factors stimulate or impede employees to share knowledge, organisations should be aware of with which strategies they can steer this individual factors in order to stimulate knowledge sharing. According to Suppiah and Singh Sandhu (2011) particular knowledge management strategies only succeed if they fit the overall organisational culture. Suppiah and Singh Sandhu (2011 p.467) state that there are four different culture types, which are the Clan culture ("a friendly place to work where people share a lot about themselves"), the Adhocracy culture ("a dynamic, entrepreneurial and creative workplace"), the Market Culture (a workplace based on "competitiveness and productivity") and the Hierarchy culture (a worker place "characterised by formalised and multiple hierarchical structures"), whereas the first two would be contributing cultures towards knowledge sharing and the last two cultures would be impeding. Organisational leaders play a central role in establishing knowledge sharing culture and strategies (De Vries et al., 2010) A lot of factors and strategies for knowledge sharing mentioned in literature fit at least one of these culture types. Nevertheless, this paper tries to make clear distinctions in different kinds of organisational factors and strategies for knowledge sharing in order to discuss why particular factors and strategies are important to take in consideration. In doing so, individual factors are integrated into the discussion to indicate how organisational factors and strategies can be related with important individual factors and therefore showing their relative importance.

3.2.1 Communicating Vision and Goals

In general, organisations need to establish clear visions and goals in order to determine how daily routines should be managed to eventually accomplish certain goals (Liu, 2006). It is the responsibility of the organisational leaders to strictly define and communicate those visions to influence how certain jobs in the workforce are performed in order to help the organisation to realise those visions (Chen & Barnes, 2006). In knowledge based organisations, one of those daily tasks is the creation and sharing of knowledge. Whether particular knowledge is valuable to an organisation or not depends on the organisation's vision and goals. Regarding knowledge sharing activities, building a heart of shared vision, core values and purpose is a very meaningful task for leaders. Based on a shared vision, the purpose of knowledge sharing can be identified and its contribution to organisational achievements can be stated (Zhang & Faerman, 2007). Evidence shows that leaders who clarify the organisation's vision and goals towards the employees and thereby point out what kind of knowledge is valuable for the organisation can stimulate knowledge sharing. For instance, based on their study Lin et al. (2009) define the top management's clearance on the organisation's vision and goals as relative important considering knowledge sharing. Also Chen & Barnes (2006) find clearance on the organisation's vision and purposes and thereby clarity among employees on their relative contribution to the organisational goals and important factor in stimulating internal knowledge sharing. A better understanding on employee's relative importance would encourage them to put more effort in their tasks (Xue et al., 2011). Hence, for knowledge workers this would mean they would be more motivated to contribute in knowledge sharing and creation in that case (Carmeli, 2013).

According to Xue et al. (2011) besides informing employees about the organisational goals and impart them the organisation's philosophy, an important aspect in that is being a good example as a leader. This would mean that leaders show their organisational commitment by sharing their knowledge first such that employees realise the importance of knowledge sharing and will follow (Xue et al., 2011). This is aligned with the study of Lee et al. (2010). They state that when leaders behave as team builders, meaning that they take initiative by for example offering new ideas and challenging existing approaches, they can instigate team discussions among employees. By signalling that open sharing of information and ideas is appreciated within the organisation, leaders can be considered as role models (Lee et al., 2010).

On the other side, a lack of clear communication on the organisation's vision and goals can form a barrier for knowledge sharing, since employees then don't have a plain indication on how they can be important for the organisation and that would impede their motivation to share their knowledge (Riege, 2005).

From the individual factor's perspective, one's confidence in its own ability to provide something that is valuable to the organisation or to others can be called "self-efficacy" (Chen & Hung, 2010). Self-efficacy is a form of self-evaluation which is an internal characteristic. However since self-efficacy is about the consideration if one's contribution is valuable or not, it is assumable that a leader who ensures clearance on what is valuable for the organisation considering its vision and goals and thereby indicates the relative importance of an employee's job can deal with someone's self-efficacy. According to Chen & Hung (2010) the higher one's self-efficacy is, the more one's willing to contribute to a certain task. For knowledge workers this would mean that one's confidence in providing valuable knowledge towards the organisation is positively related with one's motivation to contribute to knowledge sharing. Several researchers seem to agree on this statement (e.g: Cabrera et al., 2006; Lu et al., 2006; Lin, 2007). In addition, Ardichvili et al. (2003) even claim that vagueness among what is valuable to the organisation could form a barrier in knowledge sharing. When employees have a lack of self-efficacy, they can be afraid that their contribution in knowledge sharing is useless which Ardichvili et al. (2003) call the issue of "fear to lose face" in the sense of employees being afraid of reputation damage when posting something "stupid". They state that a related barrier to the fear of reputation loss is a lack of clarity on what information should be posted.

Plugging up, the clearance on the organisation's vision and goals doesn't only contribute in filtering important knowledge and ideas from those that are rather irrelevant, but it also ensures that the overall amount of knowledge sharing increases because it enhances employee's self-efficacy, whereas lack of clarity among the organisation's vision and goals can impede knowledge sharing because it could cause a lack of self-efficacy among employees.

3.2.2: Organisational Structure

Another determining factor for the performance of knowledge sharing within the organisation, is the organisational structure. Many studies seem to agree on the statement that a flat organisational structure type can facilitate and stimulate knowledge sharing. Participative decision making and ease of information flow are contributing factors of a flat organisational structure considering knowledge sharing (Ismail Al-Alawi, 2007). According to Xue et al. (2011) by applying a flat organisational structure and allowing employees to participate in decision making, employees have more opportunities to give voice to their ideas and beliefs which will contribute to the overall knowledge sharing on the workforce. This type of structure can affect employee's perception on the top management encouragement to share knowledge with colleges and the top management, which is required to ensure knowledge gets shared (Lin et al., 2009). Also Yang (2007) claims that involving employees in collaborative problem solving is positively associated with organisational knowledge sharing, which Yang (2007) considers as a part of the facilitating leadership role.

Nevertheless, when involving employees in collaborative decision making it is important to give them job autonomy. Following Cabrera et al. (2006) giving employees freedom on when, where and how to fulfil certain jobs will make them feel more responsible towards their work outcomes. Cabrera et al. (2006) therefore suggest that giving employees high job autonomy will make them engaging more in knowledge sharing.

Moreover, a hierarchical structure is being considered as a barrier for knowledge sharing. The power relationships and the often standard procedures involved with hierarchical structures would be impeding factors (Suppiah & Singh Sandhu, 2011) as well as top-down communication flows (Riege, 2005). Also according to Riege (2005) a hierarchical structure would not only restrict knowledge flow directions but would also slow down most knowledge sharing practices.

The findings of Carmeli et al. (2011) are somewhat aligned with the statement on the flat organisational structure. They state that it is important for organisational leaders to keep their distance with employees as small as possible and build a strong relationship with them, because in turn employees will feel relational identification with the leader and therefore also organisational identification with the company. Organisational identification –which also can be called organisational commitment (Van Den Hooff & De Ridder, 2004)- would be an important factor for knowledge sharing (Carmeli et al., 2011). More on the importance of and strategies on organisational commitment to affect it will be discussed under the section of organisational culture.

In short, a flat organisational structure stimulates knowledge sharing whereas a hierarchal structure impedes knowledge sharing. Besides participative decision making it is important to provide employees sufficient job autonomy such that they feel more responsible to fulfil their tasks and therefore participate more in knowledge sharing.

3.2.3: Organisational Support

Besides a transformational leader ensuring clarity among the organisation's vision and goals and thereby encouraging employees to share their knowledge, another important aspect of an adequate transformational leader is to support subordinates in fulfilling their tasks. Xue et al. (2011) state that a leader has to be able to show concern and empathy towards the concerns of the employees that withhold them to share their knowledge –such as the fear of reputation damage- in order to remove those barriers. Developing employee's competencies with empathy and consideration is being regarded as an important aspect of leadership in knowledge management (Yang, 2007). Zhang and Faerman (2007) claim that besides encouragement, it is important that leaders nurture employees in fulfilling their tasks by providing help with respect to the content or by coupling them to colleagues such that they can fulfil the tasks collaborative. Showing appreciation as a leader for the fulfilled jobs is also an important aspect in making the employees feel supported (Zhang & Faerman, 2007). In addition it is meaningful to give personal attention in coaching and advising employees rather than coach them as a group (Chen & Barnes, 2006).

From an individual perspective, perceived organisational support is regarded as an important individual motivator for knowledge sharing. According to Cabrera et al. (2006), employees who perceive organisational support would be more likely to feel important for the organisation and therefore be more likely to share their knowledge. Providing training programmes is an helpful strategy to ensure employees perceive organisational support (Cabrera et al., 2006; Lin et al., 2009). Lack of organisational support is not being considered as an actual barrier in literature. Hence considering Herzberg's two-factor theory organisational support can be considered as a "motivator" when it's present. However, instead of supporting employees and showing empathy, rather being a stern leader who constant strictly monitors how employees are performing their tasks could affect knowledge sharing negatively (Yang, 2007).

3.2.4 Social Interaction Climate

Literature claims that how knowledge sharing is practised highly depends on the type of interaction climate within an organisation. First of all there is a positive relationship between human interaction among employees and the amount of knowledge shared (Ismail Al-Alawi et al., 2007). Besides to the clearance on the organisation's vision and goals and organisational support, a sharing climate characterised by open communication and a stimulus and habit of developing new ideas is likely to affect employees as well as top management to increase social interaction and therefore their knowledge sharing intentions (Lin & Lee, 2006). According to Chen and Huang (2007) a high degree of social interaction is favourable for knowledge management and to be innovative as an organisation. Especially the informal meetings and conversations would be important in that (Lin et al., 2009). From another perspective, Connelly and Gallagher (2004) state that in an organisation with a hostile social interaction climate, employees withhold their knowledge. This findings may sound assumable but it is meaningful to mention this factor because it is fairly demanding for an organisational leader to realise human interaction among employees. An strategy for improving interaction among employees is improving office design**.** Separated offices would impede the amount of conversations between employees whereas an open disk policy would contribute to simplifying communication (Ismail Al-Alawi et al., 2007). However, it requires more to ensure employees share their knowledge voluntary.

In this case it is meaningful to take a closer look at the overall organisational culture. An organisational culture can be defined as : "The shared values, beliefs and practices of the people in the organisation" (McDermott & O'Dell, 2001, P.77). McDermott and O'Dell (2001) state that an organisational culture exists of a visible part, reflected in visible aspects such as the organisation's vision and goals, and on a much deeper level of an invisible part embedded in the way employees act and approach certain problems and in their assumptions. According to Suppiah and Singh Sandhu (2011) taken for grant values and underlying expectations and assumptions ascertained that the concept of organisational culture only has been recognised since the 1980s. They state that organisational behaviour depends more on its culture than on management directives and strategies. This is in line with the study of Lin et al., (2009) which suggests that the organisational culture dimension is the most important towards knowledge sharing compared to leadership and information technology. Rather than continually pointing out to employees that they have to interact with each other and that innovative ideas are appreciated, it is the art to build a culture where it is self-evident to deliberate with each other on new ideas. Following Martins and Terblanche (2003) a shared system of beliefs which an organisational culture offers is the key to communication and a collective understanding among the workforce. They state that the norms, values and beliefs within an organisational culture can either stimulate or impede knowledge sharing and creativity. According to Ardichvili et al. (2003), to build an interaction climate that stimulates knowledge sharing it is meaningful to set up several face-to-face communities as well as building institutional norms and standards that create a view of sharing as a moral obligation which would even be more important considering the contribution of informal interaction to knowledge sharing. Hence, besides to strategically structure employees into certain groups it is required to build on underlying norms and assumptions. Also Gurteen (1999) states that to ensure that employees show positive organisational behaviours towards knowledge sharing it is required to make knowledge sharing the norm.

Besides its direct positive relationship with knowledge sharing, it is important to discuss the aspect of interaction climate, since it would have a positive influence on employee's feelings of organisational commitment which in turn would enhance employee's knowledge sharing behaviour (Van Den Hooff & De Ridder, 2004). Van Den Hooff and De Ridder (2004) explain this relationship by claiming that the degree to which employees can actively participate in communication and interaction with each other determines their level of feelings of organisational commitment. They state that in particular affective commitment –a feeling of identification and involvement with the organisation- would in turn positively influence employee's amount of knowledge sharing. Nevertheless, commitment depends on many more other factors (e.g: Mottaz, 1988; Caldwell et al., 1990; Fornes, 2008). Moreover the importance of organisational commitment considering knowledge sharing, Cabrera et al. (2006) claim that like the variables such as turnover intention, job satisfaction and helping others, organisational commitment also seems to affect employee's engagement in knowledge sharing. Considering helping others, it is also found that enjoyment in helping others is positively related to employee's knowledge sharing attitude and intentions (Lin, 2007). According to Lin (2007) it is therefore important for organisational leaders to increase the level of the enjoyment that employees experience when helping others, perhaps by stressing how much employees depend on each other and their value to one another.

As opposed to feelings of organisational commitment, feelings of greed -"the desire to obtain the best possible outcome for oneself, or the desire to enjoy other people's contributions without cost "- would impede employees to share their knowledge (Lu et al., 2006, P. 17). Lu et al. (2006) state that employee's feelings of greed often arise because knowledge is considered by them as a private asset which leads to competitive advantage for them within the organisation. Sharing knowledge would according to those employees therefore lead to a loss in competitive advantage. When employees consider their knowledge as a public good, belonging to the whole organisation instead only to them individually, than knowledge sharing is driven by moral obligation and community interest (Ardichvili et al., 2003). However, Ardichvili et al. (2003) claim that employees tend to hoard information when they consider knowledge as a private asset. This can be considered as a public good dilemma within an organisation, which would be a trade-off between hoarding knowledge for self-interest or sharing knowledge for the collective interest (Lu et al., 2006).

Following on the public good dilemma, another important factor from the individual perspective to mention in this section on interaction climate is employee's feelings of trust. Trust can be enhanced by frequent communication and interaction (Levin et al., 2002) and many scholars suggest trust affects knowledge sharing positively. Levin et al. (2002) mention two forms of trust that are meaningful considering knowledge sharing which are benevolence trust and competence based trust, whereas benevolence trust refers to the estimation that someone will not intentionally harm another even when he or she has the opportunity to do so, and competence trust refers to the estimation if someone possesses adequate knowledge about a particular subject or not. According to Chen and Hung (2010) in general trust develops in proportion as pleasurable interaction takes place. However, to let employees experience pleasurable interaction it is required to ensure that interaction even takes place. Furthermore they state that interpersonal trust is positively related to participation in knowledge sharing. Also Ismail Al-Alawi et al. (2007) state there is a positive relationship between trust among employees and knowledge sharing within an organisation. Following Lin et al. (2009), the degree of interpersonal trust among employees is the best predictor for the amount of knowledge shared within an organisation and they claim that this finding supports the statement that whether an organisation succeeds or fails in building a knowledge sharing culture depends on if the organisation has established a social interaction culture or not. In sum, employees are more likely to participate in knowledge sharing when they trust one another's benevolence, capabilities and competencies (Xue et al., 2011). As opposed to trust as a motivator, some researchers rather consider distrust as a barrier for knowledge sharing. For instance, Riege (2005) claims that lack of trust may arise when employees presume that their colleges will misuse their knowledge or will take unjust credit for it, which will lead to knowledge hoarding. Also knowledge collecting from colleges can be limited when employees doubt the accuracy and credibility of their college's knowledge (Riege, 2005). Sharma and Singh (2012) confirm the statement of distrust as a barrier for knowledge sharing, considering trust as a prerequisite to knowledge sharing. As Hendriks (1999) puts it, even though when employees would be highly motivated to share their knowledge, they still wouldn't share their knowledge if they distrust one another.

To sum up, it is important for organisation to establish a social interaction climate because it has a direct positive influence on knowledge sharing. In addition, it has also indirect influence on knowledge sharing because it can enhance employee's organisational commitment and levels of trust which are both contributing knowledge sharing factors. It is highly important to ensure these individual factors are sufficient, because employee's with feelings of greed rather than feelings of organisational commitment as well as employees with feelings of distrust rather than trust can form barriers towards knowledge sharing.

3.2.5 Organisational Rewards

Evidence suggest that it is meaningful to implement organisational rewards into the organisational culture, in order to enhance knowledge sharing. According to Ismail Al-Alawi et al. (2007) there is a positive relationship between a reward system for knowledge sharing and knowledge sharing activity within an organisation. They even assume it is unrealistic that all employees would share their knowledge without considering what their loss or benefits are arising from the knowledge sharing action. Organisational rewards in that sense could help to extra motivate employees to share their knowledge. An organisational reward could be given in a form of monetary gifts (Lin, 2007), promotion opportunities (Lin et al., 2009), as well as praise and public recognition (Bartol & Srivastava, 2002). Also Lin et al. (2009) mention organisational rewards as an important aspect of the corporate culture.

From literature considering knowledge sharing factors from the individual perspective, this concept is regarded as employee's perceived relative advantage. Chen & Hung (2010) describe perceived relative advantage as the employee's cognition of the degree to which an action is more beneficial than its effort, in this case a knowledge sharing action. They claim that when the perception of an employee on the trade-off between benefits and effort for a knowledge sharing action is positive, this particular employee is more likely to participate in knowledge sharing. These statements on organisational rewards are aligned with the suggestion of Chen and Barnes (2006) that contingent rewarding, a form of transactional leadership, is positively related to knowledge sharing.

Nevertheless it is very important how an organisational reward system is managed. It is not clever to emphasize organisational rewards as primary knowledge sharing driver, since it especially would secure temporary compliance rather than it would maintain a knowledge sharing culture (Lin, 2007). Therefore, literature suggests it is important to build a reciprocal norm within the organisational culture. A reciprocal norm can be described as socially acceptance on giving something valuable back (in the long-term) as a party or individual to the party on the other side, when they have provided something valuable first (Chen & Hung, 2010). When this norm is implemented within the organisational culture, an individual can expect to get something valuable in return when he or she provides something valuable to the other side first, for instance their knowledge. According to Lin (2007) as opposed to organisational rewards only, this norm can ensure a long-term compliance from employees in sharing their knowledge. Also Chen and Hung (2010) state that this norm functions as a motivator for employees to share their knowledge. In addition, an organisation should be careful in what to reward. An reward systems aligned with the sharing of qualitative innovative ideas may be useful, however merely rewarding the quantity of shared ideas may be counteracting. As Hendriks (1999) states, improving knowledge sharing within an organisation is not the same as only stimulating knowledge sharing behaviour, in the sense that it is the quality of ideas that is valuable to organisations rather than the quantity of ideas. Rewarding productivity could therefore limit the quality valuable knowledge. This is aligned with the findings of Suppiah and Singh Sandhu (2011) who claim that a market culture which is based on competitiveness and productivity has a negative influence on knowledge sharing.

Plugging up, organisational rewards can stimulate knowledge sharing because it can influence employee's perceived relative advantage. Nevertheless organisations need to carefully manage such a rewarding system. It should build a norm of reciprocity within the organisational culture and it should rather reward the quality of knowledge than the quantity because that might work counteracting.

As mentioned, this paper divides the determining factors for knowledge sharing stated in literature in a matrix distinguishing the perspective of contributing factors from the perspective of factors as barriers, and distinguishing the perspective of organisational factors from individual factors. The factors discussed in this chapter are filled in. This matrix provides an overview on which knowledge sharing factors can be put against each other as contributors and barriers and it shows which factors rather have the characteristics to be either only one of them. This has resulted in a matrix showing the following determining factors in this order:

	Barriers	Contributors
	Information Technology	
	-Insufficient use of IT	
	Organisational Culture & Leadership	
Organisational Perspective	-Lack of communication of Vision and Goals -Hierarchical Structures -Monitoring Performances -Hostile Socal Interaction Climate -Rewarding Quantity	-Clear communication of Visions and Goals -Flat Structures -Organisational Support -Social Interaction Climate -Rewarding Quality
Individual Perspective	-Lack of Self-efficacy -Greed -Distrust	-Self-efficacy -Perceived Job Autonomy -Perceived Organisational Support -Commitment -Trust -Perceived Relative Advantage

Figure 1

Note that all the loose leadership- and cultural strategies mentioned above only are meaningful for organisations if they fit the overall organisational culture (Suppiah and Singh Sandhu, 2011). To build a sufficient knowledge sharing culture, organisations therefore need to try to adapt these strategies to their overall culture as much as possible (McDermott & O'Dell, 2001). Also note that this paper doesn't claim that it covers all determining factors for knowledge sharing. It has chosen determining factors that seem to be important to mention in explaining the differences and extra challenges considering knowledge sharing with contingent workers.

4. Challenges and Differences in Managing Knowledge Sharing With Contingent Workers

In this chapter, the knowledge sharing factors provided in the matrix in chapter 3 will be discussed again but this time regarding the integration of contingent workers to the workforce. Hereby, the same subheadings as in the previous chapter will be applied. Because of their so called different "psychological contract" contingent worker's individual knowledge sharing factors may differ from those for permanent workers and may be more challenging to manage. In addition, some of the individual knowledge sharing factors for permanent workers may get affected negatively when they are appointed to collaborate with contingent workers. First the concept of the psychological contract will briefly be discussed and thereafter it will be discussed how the difference in motivations and expectations between permanent workers and contingent workers plays a role in the difference between their individual knowledge sharing factors.

4.1 The Psychological Contract

As mentioned, contingent workers differ from standard employees in that their contract duration is often time bounded. Besides the difference in their prospects, contingent workers by choice also differ from standard employees who rather prefer to work in one organisation for a longer period of time, in their motivations and ambitions towards their careers (Ellinson et al. (1998); Peel & Inkson, 2004; De Cuyper and De Witte, 2008), and expectations of the relationships with the organisations they work with (O'Neill & Adya, 2007; Redpath et al., 2008). Let alone whether they are contingent worker by choice or not, the differences in the prospects, motivations and expectations between contingent workers and permanent workers can be pulled down in differences in psychological contracts (O'Neill & Adya ,2007). Whereas transactional contracts refer to a short-term reward exchange for specific knowledge sharing contributions which is the case for contingent workers, relational contracts refer to long-term relationships without specific performances-rewards agreements. Notwithstanding, most of the determining factors for knowledge sharing mentioned in literature seem to be explained based on organisational relationships of employees with standard/permanent work arrangements (Connely & Gallagher, 2004; O'Neill & Adya, 2007; Redpath et al., 2008). As Redpath et al. (2008) state, as the nature of work changes, it is highly meaningful to create a better understanding on contingent worker's motivations and experiences as well as the involved challenges with adding contingent workers to the workforce.

Besides that the literature and theories on knowledge sharing are largely based on permanent worker's motivations and behaviours, it also pre-assumes cooperation between all permanent workers in the workforce. However, integrating contingent workers to the workforce makes cooperation among employees within the workforce challenging. The possible incongruence in motivations values and goals between contingent workers and permanent workers can limit the knowledge sharing process (Lin, 2007). Also integrating contingent workers in the core workforce can cause lower levels of loyalty and trust among permanent workers towards the organisation because the permanent worker's workload could get affected negatively and contingent workers could form a barrier for promotion opportunities by taking over important tasks (Connelly & Gallagher, 2004). In addition, Connelly and Gallagher (2004) state that contingent workers sometimes face difficulties in establishing credibility among permanent workers. Hence, even when permanent workers are committed to the organisation and contingent workers are willing to share valuable knowledge, because of the permanent worker's restrictive behaviours towards the contingent workers, the provided knowledge not always get sufficient integrated within the organisation.

These findings give rise to the question how valuable the literature and theories on knowledge sharing based on standard work arrangements are considering the changing nature of work which involves more and more contingent workers. Therefore this chapter discusses the possible extra challenges and differences for knowledge sharing factors for contingent workers compared to knowledge sharing factors for permanent workers.

4.2 Information technology and contingent workers

Since a lack of sufficient use of technology may occur through lacks in the systems, or a misalignment between employees knowledge sharing intentions or understanding of those systems (Riege, 2005), it seems important as organisations to possess systems that fit employee's knowledge sharing intentions and that are convenient to use for both permanent workers as well as contingent workers. Considering the short-term contract of contingent workers it may be even more important to possess systems that are user friendly, since it should be convenient to use for contingent workers in order to be able to contribute to knowledge sharing as quick as possible.

Nevertheless, when an organisation possesses convenient systems, it is important to not get tempted to let information technology predominate social interaction, because as stated, social interaction is required for adequate knowledge sharing. This suggestion may be even more important to consider when hiring contingent workers because contingent workers sometimes tend to use information technology to help their clients rather than meeting face-to-face (O'Neill, 2014). Notwithstanding, like with permanent workers, organisations should ensure face-to-face meetings in the offices with contingent workers that are hired for their specialised knowledge.

This chapter therefore suggests that the challenging parts in hiring contingent workers for knowledge sharing lies more on the social aspects of knowledge management. The aspects of organisational leadership and organisational culture will be discussed below.

4.3 Organisational culture and leadership and contingent workers

4.3.1 Communicating Vision and Goals

As stated in chapter 3, clear communication of the organisation's vision and goals is mentioned in literature as an important factor for knowledge sharing (e.g. Chen & Barnes, 2006; Lin et al., 2009). This is because it would ensure clarity among the employees in the organisation on the importance of their knowledge sharing contributions. In another sense, it would give employees an indication how valuable they are or could be for the organisation as a whole and this would encourages them to eventually share their knowledge. From another perspective, a lack of clear communication on the organisation's vision and goals would form a barrier since employees wouldn't understand the importance of their contribution in knowledge sharing for the organisation (Riege, 2005).

As mentioned, considering this aspect from an individual perspective, someone's confidence in its own ability to provide something valuable to the organisation which is called self-efficacy, could be positively influenced by clear communication on the organisation's vision and goals. The higher someone's self-efficacy is, the more that person is likely to share its knowledge with the organisation (Chen & Hung, 2010). In line with the statement on a lack of clear communication on the organisation's vision and goals, a lack of self-efficacy would form a barrier for knowledge sharing (Ardichvili et al., 2003). In addition to not knowing what is valuable to share, one of the reasons that a lack of self-efficacy would impede someone for sharing knowledge is because it can lead to a fear of reputation damage for providing something useless (Ardichvili et al., 2003).

Regarding high-skilled contingent workers, it is assumable that they in general possess adequate self-efficacy and that they are not afraid that their contribution in knowledge sharing is useless, this especially holds for very experienced contingent workers. However, as opposed to a lack of self-efficacy, blind faith in one's own ability to provide valuable knowledge can also limit the quality of knowledge sharing within the organisation (O'Neill & Adya, 2007). Since an organisation hires contingent workers as specialists, they might consider themselves as highly valuable to the organisation which could restrict their creative and cooperative behaviour. Considering high-skilled contingent workers, organisations should communicate their goals and the importance of the workers differently. Rather than enhancing employee's self-esteem in that they can be valuable, organisations should in this case ensure an understanding among contingent workers that they are only valuable when they collaborate with permanent workers on creating new knowledge above providing already existing knowledge. Regarding permanent workers, O'Neill and Adya (2007) state that the "not invented here syndrome", which implies that when employees have blind faith in their own knowledge, they show resistance towards the infusion of new ideas. Hence, these "trust in own ability" attitudes from one or both sides can limit the cooperation between contingent workers and permanent workers, while cooperation between contingent workers and permanent workers was stated to be valuable in knowledge sharing and creating (e.g Matusik and Hill, 1998).

In addition, Yang (2012) describes that especially permanent workers sometimes have difficulties with asking questions when they do not understand something, which might also be impeding in the collaboration processes with contingent workers. This implies that when the organisation's vision and goals are communicated, organisational leaders should state the importance of cooperation between contingent- and permanent workers and thereby providing clarity on each role and formulate that explicitly to both of them.

Hence, rather than applying strategies to deal with employee's lack of self-efficacy, organisations need to focus on strategies that take into account the potential barrier of employee's blind faith in its own ability to provide something valuable for the organisation of both contingent workers as well as permanent worker when contingent workers are integrated to the workforce. Strategies on enhancing someone's self-efficacy and self-esteem may even work counteracting in that sense. Organisations should clearly state the importance of cooperation between permanent and contingent workers to both of them.

4.3.2: Organisational Structure

As mentioned in chapter 3, a flat organisational structure is described in literature as a structure that stimulates the sharing of knowledge (e.g. Yang, 2007; Xue et al., 2011). Involving employees in to collaborative decision making and giving them more opportunities to give voice to their suggestions and ideas would be positively related to employee's contribution in knowledge sharing. Hierarchical structures would form a barrier towards knowledge sharing because of their standard procedures and top-down communication flows (Riege, 2005; Suppiah & Singh Sandhu, 2011).

According to Lin (2007), the influence of participative decision making on knowledge sharing is stronger for workers with a high exchange ideology, which is likely to be the case for contingent workers considering their psychological transactional contract (O'Neill & Adya ,2007). However, on one hand, when hiring contingent workers there could be some downsides to involving them into the core-value creation areas. The danger of giving contingent workers access to valuable private knowledge, is that those contingent workers might disseminate that valuable private knowledge to the external environment such that competitors get access to that particular knowledge which could lead to a loss of competitive advantage (Matusik & Hill, 1998). On the other hand, the expertise of contingent workers might be most strengthened when they can deliberate on core-value knowledge. That is why Matusik and Hill (1998) speak of a trade-off between knowledge dissemination and knowledge creation. Hence, an organisation should vary carefully determine were to use contingent workers within the organisation and which agreements should be settled with those contingent workers.

Focussing on enhancing knowledge sharing activities between the organisation and the contingent workers, providing job autonomy is also described in literature as an important factor for knowledge sharing (e.g. Cabrera et al., 2006) regarding structuring employees within an organisation. According to (Lin, 2007) like participative decision making, the influence of received job autonomy on knowledge sharing is stronger for workers with a high exchange ideology. In addition, as Peel and Inkson (2004) stated, the likelihood of obtaining high job autonomy is one of the most important reaons employees choose contingent working. Hence providing contingent workers lots of job autonomy would be meaningful. However, the danger of segregating employees according to employment status and tasks may hinder social interaction with other employees (Connelly and Gallagher, 2004), while this is stated to be highly important in knowledge sharing. Therefore as a leader it is the art to find a balance in providing job autonomy and ensuring interaction and cooperation.

An important barrier for knowledge sharing to mention here is differences in levels of experience. Large differences in experience within a workforce may cause problems in cooperation among employees in forms of misunderstandings and crossed purposes. Riege (2005) describes this rather as a barrier in general than that it would typically be a barrier involved with the collaboration with contingent workers. However, considering that the main reason that contingent workers get hired is that they would be more specialised in a certain area than permanent workers, it would be more likely that this barrier arises when contingent workers are added to the workforce. Also for this reason, organisations should carefully determine were in the organisational structure to integrate contingent workers in order to ensure sufficient cooperation between continent workers and core-workers. In addition, organisations should ensure that their permanent workers are prepared to work with such specialised contingent workers, perhaps with the help of training programs.

Most importantly considering organisational structures and contingent workers, organisations should find a balance in providing contingent workers job autonomy and establishing social interaction between them and permanent workers. In addition, organisations need to develop a strategy to deal with the potential knowledge sharing barrier of differences in levels of experience when integrating contingent workers to the workforce.

4.3.3: Organisational Support

Organisational support is being considered as an important leadership aspect in ensuring knowledge sharing in the sense of leaders showing empathy (Xue et al., 2011), developing employee's competencies (Yang, 2007) and substantive supporting employees in their tasks (Zhang & Faerman, 2007). Rather continually monitoring how employees are performing would impede knowledge sharing (Yang, 2007).

The positive relationship between perceived organisational support and knowledge sharing only seems to hold for employees who perceive high job security from the organisation (Bartol et al., 2009). This would suggest that contingent workers, for whom it is predetermined that they will leave the organisation, perceived organisational support doesn't necessarily contribute to knowledge sharing. However, high-skilled contingent workers are used to switching from employers overtime and because of what they can provide they have high chances of being demanded over and over again by organisations (Kunda et al., 2002). Hence, even though high skilled contingent workers don't have long-term relationships with their employers, they still can have high job security. In addition, temporary agency workers are involved with intermediary staffing agencies which provides them more job security (Kunda et al., 2002). Therefore it is assumable that perceived organisational support also is positively related to the knowledge sharing contributions of high-skilled contingent workers. Hence, regarding high-skilled contingent workers there is not necessarily a difference required in the approach of organisational support because it encourages permanent workers to contribute to knowledge sharing and probably high-skilled contingent workers as well to do so.

4.3.4 Social Interaction Climate
It is suggested that an overall climate where it is self-evident to deliberate on new ideas and with the underlying norm that knowledge sharing is a moral obligation, contributes to the knowledge sharing flows within the organisation (e.g. Ardichvili et al., 2003; Martins & Terblanche, 2003). Hence it is important that organisational leaders are able to build such an culture with these underlying norms rather than continually commanding the employees to collaborate and share knowledge with each other. An organisational culture with a rather hostile social interaction climate would impede knowledge sharing (Connelly & Gallagher, 2004).

Considering the integration of contingent workers to the workforce, it would be important to build a culture where it is self-evident as permanent workers to deliberate with contingent workers and where contingent workers notice this norm as well. Unfortunately, instead of collaborating with contingent workers and creating and sharing knowledge in order to contribute to the organisation as a whole, permanent workers often show lower levels of loyalty towards the organisation when contingent workers are hired because they fear lower job security and a loss of promotion opportunities (Connelly & Gallagher, 2004; Yang, 2012). In addition, besides contingent workers are often being considered as a threat, permanent workers often don't value the work that contingent workers provide, because they rather consider contingent workers as "non-official" members or in other words, as not one of them (Connelly & Gallagher, 2004; Yang, 2012). Managers should keep this is mind when integrating contingent workers to the workforce and clearly state the importance of the role of permanent workers in the knowledge creating and sharing process with contingent workers.

Another reason that a social interaction climate stimulates knowledge sharing regarded from an individual perspective, is that it would contribute to employees feelings of organisational commitment -feelings of identification and involvement with the organisation-, which in turn ensures more knowledge sharing behaviour from individuals (Van Den Hooff & De Ridder, 2004; Cabrera et al., 2006). Notwithstanding, commitment depends on many more influenceable and uninfluenceable factors (e.g: Mottaz, 1988; Caldwell et al., 1990; Fornes, 2008).

Regardless all the possible controllable determining factors for employee's feelings of organisational commitment, it seems more challenging to ensure contingent workers feel committed to the organisational compared with permanent workers. Literature suggests that in general contingent workers have less feelings of commitment than permanent workers because of their predetermined short relationship with the organisation (Van Dyne and Ang, 1998; Süß and Kleiner, 2010; Yang, 2012). As O'Neill and Adya (2007) state, there wouldn't be sufficient time to establish feelings of commitment for newcomers. Nevertheless it seems meaningful for organisations to discover how to affect contingent worker's feelings of commitment positively, because contingent worker's feelings of commitment may be stronger related to positive organisational behaviour –in this case knowledge sharing- compared with permanent workers (Van Dyne and Ang, 1998). In addition, permanent worker's feelings of organisational commitment might be influenced negatively as well when contingent workers are integrated to the workforce, because of the reasons mentioned above in this section.

Following on feelings of organisational commitment, regarding the "public good dilemma" which implies that an individual has to deal with a trade-off between keeping knowledge to its self as a private asset and therefore having competitive advantage or sharing its knowledge for the public interest of the organisation as a whole, greed is mentioned in literature as an impeding individual factor (Ardichvili et al., 2003; Lu et al., 2006). For permanent workers this would mean that they believe that hoarding valuable knowledge will provide them competitive advantage within the organisation in the sense of promotion or loan raise opportunities. Reasons for contingent workers to hoard their private knowledge can be attempting to being longer needed by a particular organisation (Connelly & Gallagher, 2004; Yang, 2012) or because of keeping specialised knowledge to themselves and staying attractive for other organisations in the market (Matusik & Hill, 1998). Considering the public good dilemma where an individual has to choose between giving preference to itself or to the organisation, and knowing that contingent workers in general feel lower levels of commitment towards the organisation compared to permanent workers, it is assumable that contingent workers will show more greed in knowledge sharing than core workers. Hence it would be more challenging for organisations to gain valuable knowledge from contingent workers than from core workers.

Following on the public good dilemma, another important factor regarded from an individual perspective that is related to a social interaction climate is trust. Scholars suggest that frequent interaction between employees enhances their trust towards each other (e.g Levin et al., 2002; Chen and Hung, 2010), and that trust is positively related to knowledge sharing (e.g. Al-Alawi et al. (2007), Lin et al., 2009). Benevolence trust (the estimation that someone will not intentionally harm another even when he or she has the opportunity to do so) and competence trust (estimation if someone provides adequate knowledge about a particular subject or not) would be very important in that (Levin et al., 2002). Other researchers rather consider distrust as a barrier for knowledge sharing, in the sense of the presence of distrust among employees in the workforce can withhold them to share their knowledge, even when they are for the rest highly motivated to do so (e.g. Hendriks, 1999; Riege, 2005; Sharma and Singh, 2012).

Unfortunately, there often seems to be distrust between permanent workers and contingent workers when it comes to knowledge sharing (e.g. Sias, Kramer and Jenkins 1997; Nesheim and Hunskaar, 2015). These trust issues seem to occur at both sides. Core workers would withhold their private and organisational knowledge because they would suspect contingent workers for valuable knowledge leaking to the external environment since contingent workers face multiple organisations in a relative short time frame (Connelly and Gallagher, 2004). As stated, contingent workers tend to withhold their knowledge because of being longer needed in an organisation (Connelly and Gallagher, 2004) or because of fear for their loss of market value as specialists (Matusik & Hill, 1998). In the case of distrust, contingent workers would suspect the organisation for firing them immediately after the organisation get what it needs, or suspecting permanent workers for spreading the provided specialised knowledge rather than only applying it to their own organisation. As in the case with commitment, because of the relative short-time relationship between the organisation and contingent worker, there often isn't sufficient time to establish feelings of trust (O'Neill & Adya, 2012). However, according to Levin et al. (2002), it doesn't necessarily require frequent interaction to develop trust. They state that besides ensuring interaction between employees, creating a common understanding of how work gets accomplished, how work gets measured and how it gets rewarded also contributes to the development of trust among employees. Also they state that managers should demonstrate trust building behaviours by themselves by being available to interact informally and stressing that it is appreciated if employees show their concerns. Hence, it is not impossible to develop feelings of trust in the workforce when contingent workers are hired but it probably takes clear agreements on forehand on what may be shared and what not may be shared from both sides.

Plugging up, extra challenges in managing the workforce when contingent workers are integrated lie in the fact that permanent workers can show resistant behaviour in collaboration with contingent workers. Furthermore, evidence shows that contingent workers often feel lower levels of commitment compared to permanent workers because of the short-term relationship with the organisation, which would impede knowledge sharing. Because they would feel lower levels of organisational-identification, they would rather show greed behaviour and keep their knowledge to themselves as much as possible in order to being longer needed for the particular organisation or to stay attractive for the market as a specialist. Organisations should detect how to positively affect contingent workers feelings of commitment as much as possible without having a long-term relationship. Also it is found that levels of trust between contingent workers and permanent workers are often lower compared to levels of trust between all permanent workers, which would impede knowledge sharing. Again, the predetermined short-term relationship would play an important role in that. Like with employee's feelings of commitment, organisations should consider how to develop levels of trust between contingent and permanent workers as much as possible regarding the short-term relationship.

4.3.5 Organisational Rewards

Evidence suggests that the use of organisational rewards can stimulate employee's knowledge sharing (e.g. Al-Alawi et al., 2007; Lin et al., 2009). These rewards often vary in a form of monetary gifts (Lin, 2007), to promotion opportunities (Lin et al., 2009), to praise and public recognition (Bartol & Srivastava, 2002). Applying organisational rewards can have a positive effect on the employee's "perceived relative advantage", which refers to an employee's consideration on the benefits/effort ratio of a particular knowledge sharing action (Chen & Hung, 2010). Nevertheless it is stated that organisations carefully need to consider how to manage an organisational reward system. Since organisational rewards per knowledge sharing contribution would only stimulate knowledge sharing in the short-term, managers need to create an underlying norm of reciprocity such that employees know that their contribution to knowledge sharing eventually –in the long-term- will be rewarded by either getting something valuable back from a colleague or by the organisation itself (Lin, 2007; Chen & Hung, 2010). Also organisations should be careful in what exactly to reward. It should rather reward the quality of new innovative idea and knowledge than rewarding only the quantity of knowledge, because that could be counteracting towards the valuable knowledge sharing within an organisation (Hendriks, 1999; Suppiah and Singh Sandhu, 2011).

Rewarding contingent workers for their contribution to knowledge sharing may be more challenging than rewarding permanent workers. First, contingent workers have relative short relationships with their employers which makes it more difficult to involve them in the underlying norm of reciprocity in the long-term (O'Neill & Adya, 2007). In this way contingent workers are not triggered to share their knowledge by expecting to receive something back from their temporary colleagues and vice versa. In addition, O'Neill & Adya (2007) state that contingent workers perceive unrewarded knowledge sharing in the short term more quickly as a contract breach than permanent workers due to the perceptions of unmet expectations. Hence, it seems important to being able as an organisation to quickly reward any knowledge sharing contributions of contingent workers.

Second, rather than monetary incentives, high skilled contingent workers seem to most care about career progression and skill developments (Redpath et al., 2008). Rewards such as training, internal career ladders, provided knowledge or public recognition seem more to fit those desires than monetary gifts. However, such rewards are often more aligned with a long-term relationship. Considering contingent worker's expectations of getting quickly rewarded, this may be challenging. As Redpath et al. (2008) state, a relationship between an organisation and a contingent worker requires both transactional and relational elements in the sense of rewarding on a short-term, with rewards that are usually more suitable for a long-term relationship. Hence, it would be meaningful for organisations to consider what they can provide to contingent workers to support them in their career goals -such as providing new knowledge to them- within a short time frame.

To sum up, evidence shows that applying organisational rewards and building a reciprocity norm stimulates knowledge sharing. However, it seems more challenging to build a rewards system that is suitable to stimulate contingent workers to share their knowledge. Because they have a short-term relationship with their employer, they expect to get rewarded for their knowledge sharing contributions in the short-term and will therefore be more sensitive in their perceptions of contract breach when they are not quickly rewarded. In addition, high-skilled contingent workers seem to be more interested in rewards that contribute to their career paths, such as gaining new knowledge, rather than monetary rewards. However such rewards seem more feasible to provide in a long-term relationship. The challenge for organisations in this is to find a balance between providing such rewards in a short-term period.

Based on literature, it is hypothesized how important individual factors for knowledge sharing for contingent workers could differ from individual knowledge sharing factors for permanent workers, as well as how these factors for permanent workers can change when continent workers are integrated to the workforce. This paper applied the formed matrix (figure 1) in finding potential differences. The extra challenges and differences for the individual factors would suggests that it requires other and better knowledge sharing strategies from the organisational perspective. The extra challenges and differences from the individual perspective are processed in the new matrix below (figure 2).

	Barriers	**Contributors**
	Information Technology	
	-Insufficient use of IT	
	Organisational Culture & Leadership	
Organisational Perspective	-Lack of communication of Vision and Goals -Hierarchical Structures -Monitoring Performances -Hostile Soclal Interaction Climate -Rewarding Quantity	-Clear communication of Visions and Goals -Flat Structures -Organisational Support -Social Interaction Climate -Rewarding Quality
Individual Perspective	**-Too Much Trust in Own bility** **-Differences in Levels of Experience** **-Greed** **-Distrust** **-Perceived Contract Breach**	-Self-efficacy **-Perceived Job Autonomy** -Perceived Organisational Support **-Commitment** **-Trust** **-Perceived Relative Advantage**

Figure 2

**The individual factors in bold indicate that they are more challenging to manage and/or that they require other management approaches from the organisational perspective when contingent workers are integrated to the workforce. The extra management challenges and/or differences of: "Too Much Trust in Own Ability", "Differences in Levels of Experience", Trust/Distrust" holds for both permanent workers and contingent workers, whereas "Perceived Job Autonomy", "Commitment/Greed", and "Perceived Relative Advantage/Contract Breach" holds for contingent workers in particular. For the differences with important knowledge sharing factors in general, compare this matrix with figure 1.*

5. Current Literature on Strategies or Knowledge Sharing With Continent Workers

5.1 The Relevance of applicable Literature on Managing Knowledge Sharing with Contingent Workers

Based on literature it can be suggested that it is more challenging to ensure knowledge sharing within a workforce where contingent workers are integrated compared to a workforce that contains permanent workers only. Besides it is more challenging, ensuring knowledge sharing within a mixed workforce may require different approaches. First of all, stimulating knowledge sharing behaviour from contingent workers requires other strategies because they have other motivations and expectations than permanent workers. In addition, since one of the most important career goals of contingent workers is to gain new knowledge to get stronger in the market as a specialist, an organisation should ensure a balance between learning as much as possible from a contingent worker, without leaking to much valuable knowledge. Second, it seems more challenging to ensure adequate cooperation and knowledge sharing between permanent workers and contingent workers than between permanent workers only, because permanent workers may show resistant behaviours when contingent workers are integrated to the workforce. As stated, much literature that describes important factors for knowledge sharing and how this should be managed, assume a workforce containing only permanent workers workforce. Nevertheless, more and more organisations seem to integrate contingent workers into their projects in order to create valuable resources (Hipple & Stewart, 1996 Matusik & Hill, 1998; Ang and Slaughter, 2001; Cardon, 2003). Knowing that contingent workers are more and more often applied within an organisation and considering the extra challenges and different approaches it may require, the relevant question is: *to what extent is the existing literature useful to understand how to manage knowledge sharing with contingent workers?*

This paper doesn't state that the literature on knowledge sharing based on workforces that contain permanent workers only, is inapplicable for managing knowledge sharing with contingent workers. However, this paper does suggest that this literature only is not enough for organisations to fully understand how to ensure adequate knowledge management that is suitable for the integration of contingent workers. Therefore this paper examines what the existing literature already covers on the extra challenges and differences involved with ensuring knowledge sharing in a workforce with both permanent and contingent workers. To that end, this paper considers the whole process from planning to hire contingent workers in order to develop knowledge resources to the actual process of knowledge sharing with contingent workers.

5.2 Recruiting Contingent Workers

Considering recruiting high-skilled contingent workers, scholars provide different strategies for buying and applying client's knowledge expertise and compares them to one another. For instance, Mohe (2005) describes several strategies to bring in knowledge in the organisation from specialists that work as consultant outside of the organisation. The first one Mohe (2005) mentions is the relational strategy, which implies that one consulting firm supplies contingent workers for all projects within the organisation. The Fractional strategy refers to applying one consulting firm per project as an organisation. Last, the serial strategy which implies that an organisation applies multiple consulting firms overtime in the long-term on one specific project. It would depend on the kind of project which purchasing strategy would be the most suitable.

Moreover recruiting non-core employees, according to Connell and Burgess (2002), state that for the most organisation, the human resource function of recruiting temporary workers has shifted away to temporary worker agencies. Kosnik et al. (2006) discuss a few strategies regarding the use of temporary staffing vendors. They start with discussing local contracting, which means that an organisation only approaches certain staffing vendors at the moment the organisation needs contingent workers on a particular project. This would ensure a relative better fit between staffing vendors and functional needs but it would also involve higher costs. Opposed to this strategy, another strategy is to standardize the procedures of hiring contingent workers within the organisation. In this way the task of the staffing vendor gets simplified which involves lower costs for the client organisation, however this could cause a lack of the fit between specific functional needs within an organisation and the employed contingent workers (Kosnik et al., 2006). Furthermore they mention more strategies which lie in between those two.

It would depend on the importance of the fit between the capabilities of a contingent worker and its specialised knowledge and the knowledge gaps and needs an organisation has, whether an organisation would choose a standardized strategy or not. Accordingly, there seems to already exist literature that covers the recruitment of contingent workers. Nevertheless, such literature doesn't cover the issue of managing the process of knowledge sharing when these contingent workers are integrated into the workforce after they are recruited and selected.

5.3 Improving Contingent Worker's Job Performance

There does seem to exist literature that describe management strategies in order to enhance contingent worker's job performance. For example, Koene and Riemsdijk (2005) describe two extremes in strategies to improve contingent worker's job performance. On one side they mention the "expendable" strategy. The idea of this strategy is to put pressure on contingent workers by letting them know they are expandable and thereby building a highly transactional employment relationship. On the other side they mention the "special-attention" strategy. In this strategy, organisations try to put much effort in training and support for contingent workers, as well as in evaluation and appraisal in order to build a friendly employment relationship and to gain credibility of contingent workers. This second strategy seems more suitable regarding high-skilled contingent workers, since it would be unrealistic to give these specialists the illusion that they are easy expendable.

Morishima and Shimanuki (2005) hypothetically presented an approach to enhance the effectiveness of the use of contingent workers. They state that it is important to develop training programs for contingent workers to support them in achieving their career goals since that is what they most desire as a reward for their contributions to the organisations. However, because of the short-term employment relationship its seem highly challenging to build such training programs within a particular organisation. Therefore Morishima and Shimanuki (2005) state that organisations should collaborate with temporary staffing agencies to develop such training programs which finally should be provided by those temporary staffing agencies. In addition they state organisations need to ensure that contingent workers have the feeling that they are equally treated regarding permanent workers because that would positively influence their perceived fairness and therefore job satisfaction and job performance.

Notwithstanding, literature that describe management strategies to enhance contingent worker's job performance still wouldn't be enough to understand how to enhance their knowledge sharing behaviour. It is assumable that enhancing knowledge sharing between contingent and permanent workers is even more challenging than enhancing contingent worker's general job performance, because knowledge can be a highly valuable private (individual) resource and every time it is provided it becomes less private and thereby possibly less valuable, whereas general job performances can be provided over and over without further consequences of loss of value.

5.4 Current Literature on Managing Knowledge Sharing with Contingent Workers

After a thoroughly literature review it appears that there is hardly specifically written about how to approach the management of knowledge sharing and contingent workers. Even though important knowledge sharing factors for both permanent workers and contingent workers are described and the important differences between those are stressed by some researchers, there are hardly any knowledge sharing management strategies suggested that take into account the extra challenges and difference when contingent workers are integrated into the workforce.

Matusik and Hill (1998) seem to be one of the few who attempted to provide suggestions on this issue. They have made these suggestions from the perspective to limit valuable organisational knowledge leaking and to maximize knowledge transfer and creation. They state that to limit valuable knowledge leaking because of contingent workers, organisations should apply safeguards mechanisms such as nondisclosure agreements or literally walling of sensitive activities and functions from contingent workers. Regarding the maximizing of knowledge sharing and creation with contingent workers, Matusik and Hill (1998) mention that organisations should not forget to motivate their core workers to gain knowledge from contingent workers by rewarding attaining information and forming groups of both permanent and contingent workers. In spite of that an organisation has to ensure that their permanent workers are aware of the dangers involved with worker with contingent workers, organisations also need to ensure that permanent workers regard contingent workers as an opportunity rather than a threat. Also they claim that organisations carefully should place contingent workers with permanent workers who perform similar or related tasks in order to improve knowledge absorption and retention. In order to encourage contingent workers to share their knowledge, Matusik and Hill (1998) state that both rewards per knowledge sharing contribution, as well as wage increase after a pleasurable cooperation can be meaningful to enhance knowledge sharing. However, even though Matusik and Hill (1998) describe knowledge as a valuable organisational asset, they seem to neglect that knowledge is also a very important private asset for contingent workers in their suggestions on managing knowledge sharing with contingent workers. On one hand, as stated, the fact that contingent workers often regard their knowledge as highly valuable as long as they keep it to their selves can form a barrier towards knowledge sharing. On the other hand, providing contingent workers new knowledge can be an extra motivator for them to contribute to knowledge sharing. Hence, providing new knowledge to contingent workers could stimulate them to share more knowledge, however Matusik and Hill (1998) seem to aim at monetary rewards only.

It seems meaningful to develop strategies for knowledge sharing with contingent workers that also take into account the aspect of knowledge as an individual valuable private asset. As Redpath et al. (2008) state, since high skilled knowledge contingent workers are most interested in how their short-term relationship with an organisation affects their careers, managers should be able to retain the intellectual capital that contingent workers provide when they are employed, while at the same time contribute to the development of contingent worker's career. However Redpath et al. (2008) claim that especially regarding contingent worker's career concerns and developments, both managers as well as contingent workers seem not fully prepared to deal with the short-term employment relationships which occur more and more often. Therefore they suggest that it is meaningful to conduct further research on how contingent workers regard there short-term relationship as a contributor to their careers and what they need and desire in order to let those work experiences be valuable to their careers. According to Redpath et al. (2008) this would contribute to a desirable new employment model.

Moreover researchers that have attempted to provide suggestions on how to manage knowledge sharing with contingent workers, based on the important difference in psychological contracts for permanent and contingent workers O'Neill and Adya (2007) found, they suggested to set up introduction programs for contingent workers to get familiar with the organisational culture, the employed permanent workers and the information technology. However, they do not provide a strategy in detail on how to manage the extra challenges and differences involved with knowledge sharing with contingent workers.

As stated, even though there are researchers pointing out important difference and challenges in knowledge sharing with contingent workers compared to knowledge sharing with permanent workers only within an organisation, there are hardly specific strategies suggested on these statements. Based on all the provided literature in this paper, it agrees on the statement that more research has to be conducted to contingent knowledge worker's motivations and desires in order to make it possible to create applicable theory and strategies for organisations in managing knowledge sharing that take into account the extra challenges and differences involved with the integration of contingent workers to the workforce. More specifically, based on a literature review on potential extra challenges and differences in managing knowledge sharing within a mixed workforce of permanent and contingent workers (See figure 2 for an overview of these findings), this paper argues that further research should provide better explanation on how to manage contingent worker's individual factors for knowledge sharing as well as for permanent workers when contingent workers are integrated to the workforce in the sense of:

1. How to limit the potential barrier of contingent worker's blind trust their own capabilities as well as for permanent workers.
2. How to provide contingent workers sufficient job autonomy without harming social interaction between contingent workers and permanent workers
3. How to limit the potential barrier of differences in levels of experience between contingent workers and permanent workers.
4. How to enhance contingent worker's feelings of commitment and how to limit the potential barrier of greed
5. How to establish feelings of trust between contingent workers and the organisation including its permanent workers and how to limit the potential barrier distrust
6. How to positively affect contingent worker's perceived relative advantage for their knowledge sharing contributions and how to limit their perceptions of contract breach

These findings should eventually contribute to building applicable leadership- and cultural strategies for organisations such that they have a clear overview and understanding on how to enhance knowledge sharing within a mixed workforce of both permanent- and contingent workers.

6. Conclusion & Discussion

6.1 Conclusion

Based on this literature review, it can be stated that within the growing knowledge based economy these days, knowledge is the main organisational resource to gain competitive advantage with. High-skilled contingent workers from outside the organisation seem to be highly valuable in creating such private knowledge when they collaborate with permanent workers. For this reason, organisations tend to deploy contingent workers on their projects more and more often. However, knowledge sharing between the organisation -including its permanent workers- and contingent workers seems often to have its limitations. It appears that because of their different psychological contract, contingent worker's individual knowledge sharing factors are often less sufficient than that of permanent workers whereby contingent workers tend to engage less in knowledge sharing. The important individual knowledge sharing contributors of self-efficacy, commitment and trust are more likely for contingent workers to become the knowledge sharing barriers of too much trust in their own ability, greed and distrust towards the organisation and its permanent workers, respectively. In addition, it seems more challenging to motivate contingent workers with organisational rewards. Worse still, contingent workers are more sensitive in their perceptions of contract breach than permanent workers. Regarding permanent workers, it holds that they often are not open for knowledge that contingent workers provide and that they can be restrictive in providing knowledge to contingent workers because also they often have certain feelings of distrust. The last knowledge sharing barrier found in this literature review is differences in levels of experience between employees, which is more likely to occur when specialised high-skilled contingent workers are integrated to the workforce. These findings suggest that it requires other and better organisational knowledge sharing strategies to ensure that knowledge sharing is still sufficient when there has to be cooperated with contingent workers such that contingent worker's knowledge retains within the organisation after they leave. Although current literature provides knowledge sharing frameworks and strategies based on a workforce containing permanent workers only, it seems to neglect the extra challenges and differences involved with the integration of contingent workers to the workforce. Therefore this paper suggests that more research should be conducted to these knowledge sharing factors and how they are regarded by both contingent workers as well as permanent workers when they are appointed to share knowledge and to collaborate on creating new knowledge, in order to build applicable knowledge sharing strategies that take into account these mentioned extra challenges and required different approaches. To answer the main research question: "*To what extent does the existing literature on knowledge sharing addresses the organisational issue of knowledge sharing with contingent workers?"* it can be stated that literature describes a lot of challenges and differences for knowledge sharing with contingent workers. However, even though recruiting strategies are provided to benefit from contingent worker's specialised knowledge as well as strategies to enhance contingent worker's job performances, it hasn't been specifically stated yet how to manage knowledge sharing within a workforce where contingent workers are integrated.

6.2 Discussion

Considering the validity of the statements of this literature study, it has to be acknowledged that not many scholars have specifically found lower levels of knowledge sharing when contingent workers are integrated to the workforce. Nevertheless, based on this literature review which conducted important knowledge sharing factors and found that many of them are often insufficient for both contingent workers as well as for permanent workers when they have to cooperate, it is assumed that many organisations face difficulties with knowledge sharing when contingent workers are hired. It could be however the case that some organisations don't face these difficulties which would make new literature on knowledge sharing with contingent workers less relevant. In addition most of the challenges in knowledge sharing with contingent workers mentioned in this paper are based on studies that have examined knowledge sharing with contingent workers, whereas some challenges are based on studies that describe knowledge sharing challenges in general, assuming that they are more likely to occur when contingent workers are integrated to the workforce. This is for instance the case with the knowledge sharing barrier of differences in levels of experience. This paper assumes this is more likely to occur when contingent workers and permanent workers are assigned to cooperate with each other, however this hasn't been empirically proven.

Regarding the statement that the current literature hardly provides any strategies on how to manage the extra challenges and differences involved with knowledge sharing with contingent workers, besides a literature review on strategies for knowledge sharing with contingent workers, also research has been done to other comparable literature fields. One of those fields was literature on knowledge spill overs, which is about multiple organisations working on the same projects and developments and therefore exchange knowledge. However, eventually this literature has not been applied in discussing knowledge sharing with contingent workers in this paper, because it has been discussed that the challenges of knowledge spill overs between organisations differ to much from challenges of sharing knowledge with contingent workers as an organisation to compare the involved strategies with each other. The idea of knowledge spill overs is namely that all parties that contribute to the particular developments eventually benefit from those developments, whereas contingent workers don't directly benefit from the developments they contribute to within a particular client organisation. Perhaps there is other literature that can be learned from considering knowledge sharing with contingent workers that this literature study has overlooked.

Although it is found that knowledge sharing with contingent workers as organisation could lead to knowledge dissemination and a loss of competitive advantage (Matusik and Hill, 1998), this paper rather aims on ensuring as much knowledge donation from contingent workers and knowledge retention within the organisation as possible. Therefore this paper suggests that first theories have to be developed on how to enhance knowledge sharing with contingent workers only, before sufficient theories can be developed on how to deal with the trade-off between knowledge gaining and knowledge dissemination as organisations. This paper namely doesn't suggest that this trade-off is unimportant to take into account. Notice that this paper doesn't provide a framework on how to manage knowledge sharing with contingent workers because it states that there is not enough literature available to do so. Therefore this paper has provided suggestions on what research has to be conducted in order to contribute to develop applicable frameworks for organisations on knowledge sharing with contingent workers.

As stated, more and more organisations hire contingent workers to improve and extent their knowledge resources because contingent workers can be of added value in that process. However, the collaboration between organisations including its permanent workers and contingent workers on knowledge creation seems often to be limited and appears to be more challenging to manage than knowledge creation with permanent workers only. This paper argues that organisations need to focus on new (different and better) strategies to ensure appropriate collaboration with contingent workers on knowledge sharing and creation. Nevertheless, organisations that tend to improve and extent their knowledge resources by hiring contingent workers need to ask themselves if they want to invest in new knowledge sharing strategies or that they might want to focus on other ways of creating knowledge with mainly permanent workers, since the promised theories on the added value of contingent workers in knowledge creation often don't apply.

References

-Allen, T. J. (1977). Managing the flow of technology: technology transfer and the dissemination of technological information within the R and D organization.

-Ang, S., & Slaughter, S. A. (2001). Work outcomes and job design for contract versus permanent information systems professionals on software development teams. *Mis Quarterly*, 321-350.

-Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. *Journal of knowledge management*, *7*(1), 64-77.

-Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. *Organizational behavior and human decision processes*, *82*(1), 150-169.

-Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120.

-Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership & Organizational Studies*, *9*(1), 64-76.

-Bartol, K. M., Liu, W., Zeng, X., & Wu, K. (2009). Social exchange and knowledge sharing among knowledge workers: The moderating role of perceived job security. *Management and Organization Review*, *5*(2), 223-240

-Beesley, L. G., & Cooper, C. (2008). Defining knowledge management (KM) activities: towards consensus. *Journal of knowledge management*, *12*(3), 48-62.

-Bendapudi, V., Mangum, S. L., Tansky, J. W., & Fisher, M. M. (2003). Nonstandard employment arrangements: A proposed typology and policy planning framework. *People and Strategy*, *26*(1), 24.

-Burgess, J., & Connell, J. (2006). Temporary work and human resources management: issues, challenges and responses. *Personnel Review*, *35*(2), 129-140.

-Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, *17*(2), 245-264

-Caldwell, D. F., Chatman, J. A., & O'Reilly, C. A. (1990). Building organizational commitment: A multifirm study. *Journal of occupational Psychology*, *63*(3), 245-261.

-Carmeli, A., Gelbard, R., & Reiter-Palmon, R. (2013). Leadership, creative problem-solving capacity, and creative performance: The importance of knowledge sharing. *Human Resource*

-Carré, F. J. (2000). *Nonstandard work: The nature and challenges of changing employment arrangements*. Cornell University Press.

-Chen, L. Y., & Barnes, F. B. (2006). Leadership behaviors and knowledge sharing in professional service firms engaged in strategic alliances. *Journal of Applied Management and Entrepreneurship*, *11*(2), 51.

-Chen, C. J., & Huang, J. W. (2007). How organizational climate and structure affect knowledge management—The social interaction perspective. *International Journal of Information Management*, *27*(2), 104-118.

-Choi, S. Y., Lee, H., & Yoo, Y. (2010). The impact of information technology and transactive memory systems on knowledge sharing, application, and team performance: a field study. *MIS quarterly*, 855-870.

-Choo, C. W. (1996). The knowing organization: How organizations use information to construct meaning, create knowledge and make decisions. *International journal of information management*, *16*(5), 329-340.

-Connelly, C. E., & Gallagher, D. G. (2004). Emerging trends in contingent work research. *Journal of management*, *30*(6), 959-983.

-Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business Press.

-Davison, R. M., Ou, C. X., & Martinsons, M. G. (2013). Information technology to support informal knowledge sharing. *Information Systems Journal*, *23*(1), 89-109.

-Dessler, G. (2001). Management: Leading People and Organizations in the 2131 Century.

-De Vries, R. E., Bakker-Pieper, A., & Oostenveld, W. (2010). Leadership= communication? The relations of leaders' communication styles with leadership styles, knowledge sharing and leadership outcomes. *Journal of business and psychology*, *25*(3), 367-380.

-Ellingson, J. E., Gruys, M. L., & Sackett, P. R. (1998). Factors related to the satisfaction and performance of temporary employees. *Journal of applied psychology*, *83*(6), 913.

-Felstead, A., & Jewson, N. (1999). Flexible labour and non-standard employment: an agenda of issues. In *Global trends in flexible labour* (pp. 1-20). Macmillan Education UK.

-Fornes, S. L., Rocco, T. S., & Wollard, K. K. (2008). Workplace commitment: A conceptual model developed from integrative review of the research. *Human Resource Development Review*.

-Grant, R. M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California management review*, *33*(3), 114-135.

-Golden, L., & Appelbaum, E. (1992). What was driving the 1982–88 boom in temporary

-Gurteen, D. (1999). Creating a knowledge sharing culture. *Knowledge Management Magazine*, *2*(5), 1-4.

-Hall, R. (1993). A framework linking intangible resources and capabiliites to sustainable competitive advantage. *Strategic management journal*, *14*(8), 607-618.

-Hendriks, P. (1999). Why share knowledge? The influence of ICT on the motivation for knowledge sharing. *Knowledge and process management*, *6*(2), 91.

-Herzberg, F. I. (1966). Work and the nature of man.

-Hipple, S., & Stewart, J. (1996). Earnings and benefits of contingent and noncontingent workers. *Monthly Lab. Rev.*, *119*, 22.

-Huysman, M., & Wulf, V. (2006). IT to support knowledge sharing in communities, towards a social capital analysis. *Journal of information technology*, *21*(1), 40-51.

-Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, *2*(4), 337-359.

-Kalleberg, A. L. (2000). Nonstandard employment relations: Part-time, temporary and contract work. *Annual review of sociology*, 341-365.

-Ismail Al-Alawi, A., Yousif Al-Marzooqi, N., & Fraidoon Mohammed, Y. (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of knowledge management*, *11*(2), 22-42.

-Issa, R. R., & Haddad, J. (2008). Perceptions of the impacts of organizational culture and information technology on knowledge sharing in construction. *Construction Innovation*, *8*(3), 182-201.

-Kim, S., & Lee, H. (2006). The impact of organizational context and information technology on employee knowledge-sharing capabilities. *Public Administration Review*, *66*(3), 370-385.

-Kunda, G., Barley, S. R., & Evans, J. (2002). Why do contractors contract? The experience of highly skilled technical professionals in a contingent labor market. *ILR Review*, *55*(2), 234-261.

-Lee, P., Gillespie, N., Mann, L., & Wearing, A. (2010). Leadership and trust: Their effect on knowledge sharing and team performance. *Management learning*.

-Levin, D. Z., Cross, R., Abrams, L. C., & Lesser, E. L. (2002). Trust and knowledge sharing: A critical combination. *IBM Institute for Knowledge-Based Organizations*, *19*.

-Lin, C. P. (2007). To share or not to share: modeling knowledge sharing using exchange ideology as a moderator. *Personnel Review*, *36*(3), 457-475.

-Lin, H. F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of information science*, *33*(2), 135-149.

-Lin, H. F., Lee, H. S., & Wang, D. W. (2009). Evaluation of factors influencing knowledge sharing based on a fuzzy AHP approach. *Journal of Information Science*, *35*(1), 25-44.

-Liu, C. M. (2006). The effect of organisational vision on service quality delivery. *The Service Industries Journal*, *26*(8), 849-859.

-Luecke, R., & Katz, R. (2003). *Harvard business essentials: managing creativity and innovation*. Harvard Business School Press.

-Martins, E. C., & Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European journal of innovation management*, *6*(1), 64-74.

-Matusik, S. F., & Hill, C. W. (1998). The utilization of contingent work, knowledge creation, and competitive advantage. *Academy of management review*, *23*(4), 680-697.

-McDermott, R., & O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of knowledge management*, *5*(1), 76-85.

-Mottaz, C. J. (1988). Determinants of organizational commitment. *Human relations*, *41*(6), 467-482.

-Nesheim, T., & Hunskaar, H. M. (2015). When employees and external consultants work together on projects: Challenges of knowledge sharing. *International Journal of Project Management*, *33*(7), 1417-1424.

-Nunez, I., & Livanos, I. (2015). Temps "by choice"? An Investigation of the Reasons Behind Temporary Employment Among Young Workers in Europe. *Journal of Labor Research*, *36*(1), 44-66.

-O'Brien, J. A., & Marakas, G. M. (2006). *Management information systems*. McGraw-Hill Irwin.

-Oliveira, T., & Martins, M. F. (2011). Literature review of information technology adoption models at firm level. *The Electronic Journal Information Systems Evaluation*, *14*(1), 110-121.

-O'Neill, B. (2014). Managing Labor Market Changes: Essential Skills for Entrepreneurs and Intrapreneurs. *Journal of Family & Consumer Sciences*, *106*(2), 9-15.

-O'Neill, B. S., & Adya, M. (2007). Knowledge sharing and the psychological contract: Managing knowledge workers across different stages of employment. *Journal of Managerial Psychology*, *22*(4), 411-436.

-Redpath, L., Hurst, D., & Devine, K. (2008). Knowledge workers, managers, and contingent employment relationships. *Personnel review*, *38*(1), 74-89.

-Pan, S. L., & Leidner, D. E. (2003). Bridging communities of practice with information technology in pursuit of global knowledge sharing. *The Journal of Strategic Information Systems*, *12*(1), 71-88.

-Peel, S., & Inkson, K. (2004). Contracting and careers: choosing between self and organizational employment. *Career Development International*, *9*(6), 542-558.

-Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic management journal*, *14*(3), 179-191.

-Polivka, A. E., & Nardone, T. (1989). On the definition of contingent work. *Monthly Lab. Rev.*, *112*, 9.

-Porter, M. E. (1980). Competitive strategy: Techniques for analyzing industries and companies. *New York*.

-Quinlan, M., & Bohle, P. (2004). Contingent work and occupational safety. *The psychology of workplace safety:* 81-105. Washington: American Psychological Association.

-Riege, A. (2005). Three-dozen knowledge-sharing barriers managers must consider. *Journal of knowledge management*, *9*(3), 18-35

-Sharma, B. P., & Singh, M. D. (2012). Knowledge sharing barriers: An approach of interpretive structural modeling. *IUP Journal of Knowledge Management*, *10*(3), 35.

-Sher, P. J., & Lee, V. C. (2004). Information technology as a facilitator for enhancing dynamic capabilities through knowledge management. *Information & management*, *41*(8), 933-945

-Sias, P. M., Kramer, M. W., & Jenkins, E. (1997). A comparison of the communication behaviors of temporary employees and new hires. *Communication Research*, *24*(6), 731-754.

-Suppiah, V., & Singh Sandhu, M. (2011). Organisational culture's influence on tacit knowledge-sharing behaviour. *Journal of knowledge management*, *15*(3), 462-477.

-Süß, S., & Kleiner, M. (2010). Commitment and work-related expectations in flexible employment forms: An empirical study of German IT freelancers. *European Management Journal*, *28*(1), 40-54.

-Tan, H. H., & Tan, C. P. (2002). Temporary employees in Singapore: what drives them?. *The Journal of Psychology*, *136*(1), 83-102.

-Uzzi, B., & Barsness, Z. I. (1998). Contingent employment in British establishments: Organizational determinants of the use of fixed-term hires and part-time workers. *Social Forces*, 967-1005.

-Van Den Hooff, B., & De Ridder, J. A. (2004). Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of knowledge management*, *8*(6), 117-130.

-Van Dyne, L., & Ang, S. (1998). Organizational citizenship behavior of contingent workers in Singapore. *Academy of management Journal*, *41*(6), 692-703

-Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, *20*(2), 115-131.

-Xue, Y., Bradley, J., & Liang, H. (2011). Team climate, empowering leadership, and knowledge sharing. *Journal of knowledge management*, *15*(2), 299-312

-Yang, J. T. (2007). Knowledge sharing: Investigating appropriate leadership roles and collaborative culture. *Tourism management*, *28*(2), 530-543.

-Yang, X. C. (2012). Contingent Worker, Permanent Loser?--How Perceived Trust Shapes Communication between Contingent Workers and Standard Workers in Knowledge-based Organizations. *International journal of business and social science*, *3*(8).