<div align="center">**Chapter-7**</div>

<div align="center">**Evaluating Knowledge Management and Organizational Performance**</div>

This chapter broadly investigates the impact of knowledge management on the Organizational Performance of studied Non-Governmental organizations (NGOs). This study utilized the concept of Intellectual Capital (IC) as the method to evaluate Knowledge Management (KM) and Organizational Performance (OP) in the context of Non-governmental organizations studied due to the close link between KM and IC.

7.1 Knowledge Management Infrastructure of the studied Organizations: The following section gives an overview about the main findings of the characteristics of the both Low Performing and High Performing NGOs. These findings were obtained via interviews and in-depth document research. While the data for the evaluation of the organizational culture were only obtained through interviews, the data for the evaluation of the organizational structure and the IT support were acquired through interviews and document research.

7.1.1. KM infrastructure for High Performing NGOs: High Performing NGOs have developed procedures for most of the services offered in order to guarantee that the services are efficient and effective. Most employees within the local offices are in general directly contracted by the head office. Employees are often sent for a limited period (up to five years) from the head office to the local offices.

Decisions which affect the daily work are taken by the local offices without consulting the head office or referring to another entity. Decisions which have an impact on the budget have to be consulted with the head office as well as concerning those decisions in respect to human resources or strategy.

These NGOs have well established database which can be accessed by all employees within the head office as well as the local offices. These Organizations offer best practice database; database for templates for forms, letters and presentations; and database with contact details of all employees, the database contains further functions such as platform where employees can publish private information and comments; information regarding office tasks and administrative support.

Table 7.1: Overview of the qualitative data collected with regards to the KM infrastructure for High Performing NGOs

KM Infrastructure / Variable name		Results
Organizational Culture	OC	The overall organizational cultures can be described as result oriented supported by procedures
		Leaderships are characterized as result oriented, coordinating and organizing
		Most employees within the local offices are in general directly contracted by the head offices. Employees are often send for a limited period (up to five years) from the head offices to the local offices and return back to the head office. Thus, employment security is characterized as high and stable
		Since the financial situation is relatively secure the overall strategic emphasis is focusing on efficiency and smooth operation.
Organizational Structure	OS	Actions in respect to the daily work can be done without consulting the head office
		Decisions about strategy, budget, human resources and IT have to be discussed with the head office
		Close relationships with government and donors, for some decisions need to refer
IT support	IS	IT support for information and knowledge sharing is provided through the head offices as well as the local offices
		IT support for information and knowledge acquisition is provided through the head offices as well as the local offices
		IT support for information and knowledge finding and accessing is provided through the head offices as well as the local offices
		These NGOs have well-established databases which can be accessed by all employees within the head offices as well as all employees within the local offices. Apart from the same functions the database of these NGOs offer (best practice database; a database for templates for forms, letters and presentations; and a database with contact details of all employees), the database contains further functions like training functions; platforms where employees can publish private information and comments; as well as information regarding office tasks and administrative support.
		Access is controlled by the head office and all employees have access to the databases.

7.1.2. KM infrastructure of Low Performing NGOs: Low Performing NGOs do not have developed procedures for most of the services offered in order to guarantee that the services are efficient and effective. Staff members of the offices are usually employed on a local contract but the head office coordinates where positions might become vacant and sends information about these positions to employees of the local offices. Most decisions

are made within the local offices without consulting the head office or referring to another entity. Decisions which have an impact on the budget have to be consulted with the head office.

These organizations have less developed database and intends to link the employees of the local offices and support them in their tasks as well as informing them what services others are offering. The database is still in the development phase and only selected employees have access to the database. The database contains best practice database; a database for templates for forms, letters and presentations; and a database with contact details of all employees who have access to the database.

Table 7.2: Overview of the qualitative data collected in regards to the KM infrastructure for Low Performing NGOs

KM Infrastructure / Variable name		Results
Organizational Culture	OC	The overall organizational cultures can be described as result oriented supported by entrepreneurial behaviour
		Leaderships are characterized as innovative and employees are encouraged to develop new services in order to increase revenue sources
		Most employees of the local offices are usually employed on a local contract. The head offices support finding a new position when contract is due but does not guarantee new position. Thus employment security is low and instable.
		Since the government grant usually covers only a small part of the whole budget for the local office, local offices have to be highly flexible and innovative in order to generate income through services.
Organizational Structure	OS	Most actions can be taken without consulting the head office, only actions which would have an impact on the budget have to be consulted with the head offices
		Decisions about strategy, human resources and IT are made within the local office, decisions regarding the budget have to be discussed with the head offices
		There is no need to refer to someone else directly; decisions which would involve the government are usually directed via the head offices.
IT support	IS	IT support for information and knowledge sharing is provided through the head offices as well as the local offices
		IT support for information and knowledge acquisition is provided through the head offices as well as the local offices
		IT support for information and knowledge finding and accessing is provided through the head offices as well as the local offices

| | | Low Performing NGOs have developed their Databases recently. Databases have been developed with the intention to link the employees of the local offices and support them in their tasks as well as informing them what services other offices are offering. The databases are still in the development phase. The databases contain best practice database; a search function for experts within the network of the local offices and for experts outside the network. |
| | | Access to the databases is controlled by the head office and limited to selected users. |

7.2 Information/Knowledge Management: To evaluate the structural capital (IT systems: SC/ITS1 and SC/ITS2) of the organizations, respondents were asked for information about existing data bases (i.e., information or knowledge data base) provided by the organization, if they were using these data bases and who had access to these databases (colleagues within the office, colleagues from other local offices, staff from the head office, staff from the funding organization or staff from other related organizations)?

While respondents from both type of organizations had a response rate of 100% for having an information database established and using it, the organizations differed in their replies regarding a knowledge data base. As shown in the figure 7.1 and 7.2 total, 66.7% of the respondents of Low Performing NGOs indicated that they had knowledge databases established with a 75% usage rate. Respondents of High Performing NGOs indicated that 88.6% of them had knowledge databases established with a 100% usage rate.
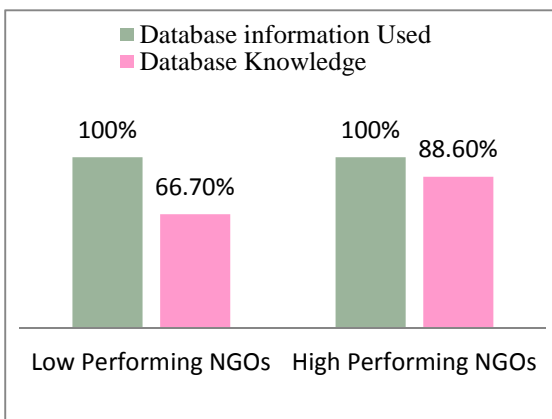

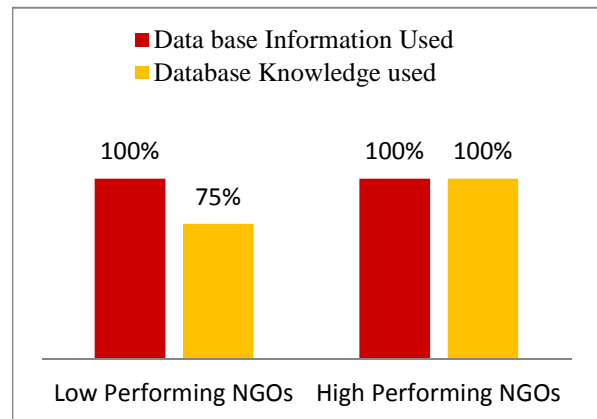**Figure 7.1**: Existence of Information and Knowledge Data Bases

Figure 7.2: Usage rate of Information and Knowledge Data Bases

Figure 7.1 and **Figure 7.2** show the usage rate of the information and knowledge databases by the respondents.

Access to the databases (information and knowledge) was more limited to colleagues within Low Performing NGOs than within High Performing NGOs.

Figure 7.3 gives an overview of responses regarding access to information and knowledge database

The last question in this section was aimed at finding out who the respondents believed was responsible for managing knowledge in the organization, and if they believed it
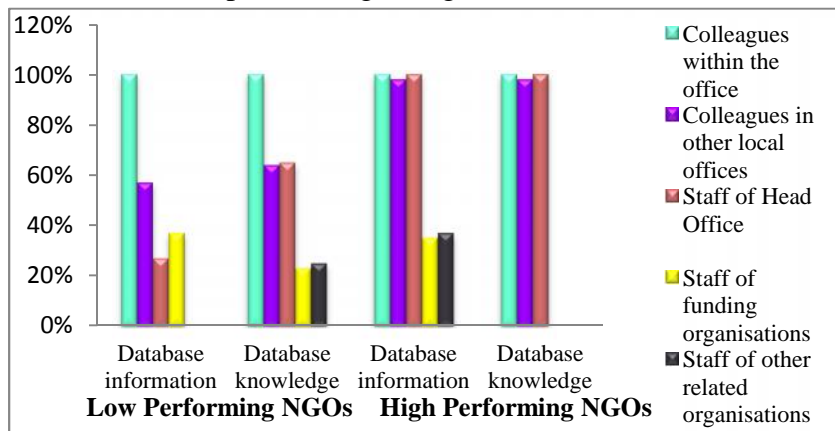

Figure 7.3: Access to Information and Knowledge Data Bases

would be necessary to have a "Chief Information/Knowledge Manager" responsible to manage information and knowledge within their organizations.

The majority of respondents from both type of organizations indicated that they believed "it is everybody's job" to be responsible for managing knowledge (65% in High Performing NGOs and 56.20% in Low Performing NGOs). However, it should be noted that the establishment of a "Chief Information/Knowledge Manager" in both type of organizations was recognized as very important (88.9% in High Performing NGOs and
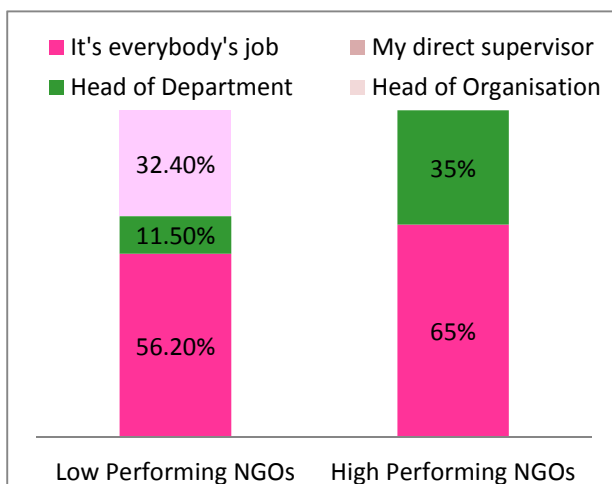

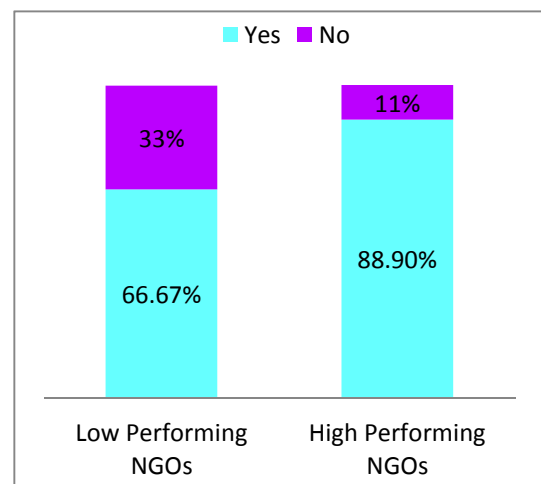**Figure 7.4:** Responsibility for managing knowledge

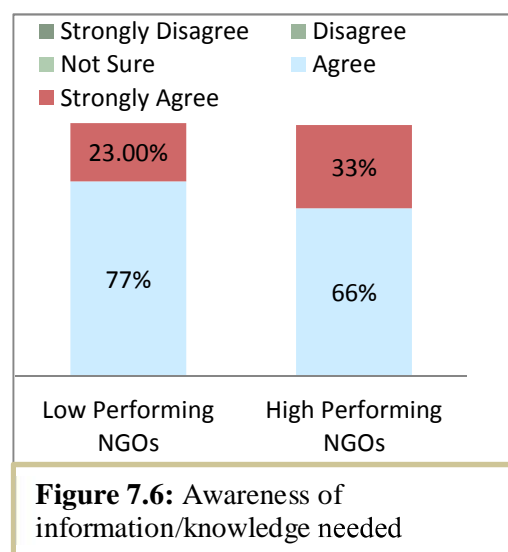**Figure 7.5**: Importance of establishing a "Chief Knowledge Officer"

66.67% in Low Performing NGOs). The distribution of the rating of the responsibility for managing knowledge is shown in Figure 7.4, while Figure 7.5 demonstrates the

distribution of responses relating to the importance for a Chief Information/Knowledge manager.

7.2.1 Information/Knowledge Needs: In the second section of the survey, data was collected to evaluate the human capital (employee capability: HC/EC1 and HC/EC2) of the organizations through assessment of the information and knowledge needs of the respondents.

Respondents rated the extent that they were fully aware of the information/knowledge they needed to fulfill their job effectively; if they had this information/knowledge already available; and if they had full access to the information/knowledge need to fulfill their job effectively.

Overall, the results revealed that employees of High Performing NGOs were slightly more confident that they were aware of the information and knowledge they need to fulfill their jobs (33.45% strongly agree and 66% agree) compared to employees of Low Performing NGOs (22.80% strongly agree and 77% agree). Figure 7.6 illustrates the respondents perceptions of the extent that they were aware of the knowledge they needed to fulfill their jobs effectively.

Figure 7.6: Awareness of information/knowledge needed

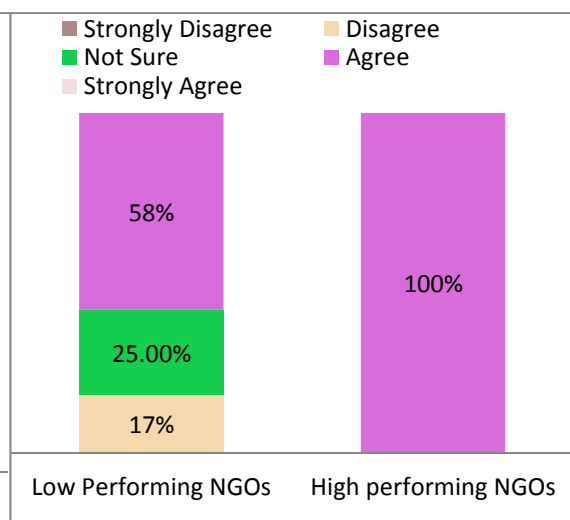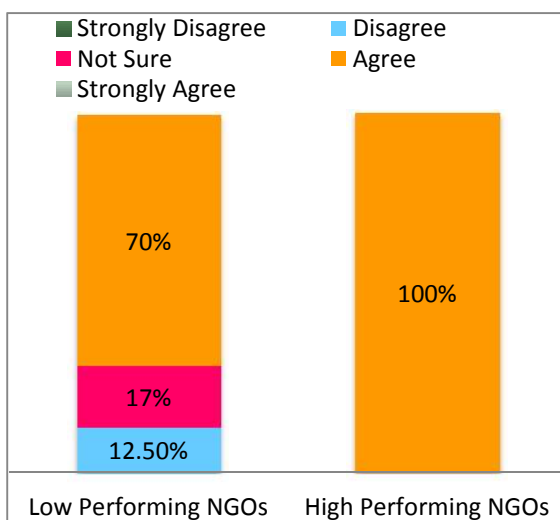With respect to availability of the information and knowledge needed to fulfill their jobs,

Figure 7.7: Availability of information /knowledge needed

Figure 7.8: Access to information /knowledge needed

employees of the studied High Performing NGOs believed they always had the information and knowledge needed (100% agree). In contrast to this, only 70% of the

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employees of Low Performing NGOs reported that they had the information and knowledge needed always available, while 17% were not sure and 12.5% even disagreed with the statement. Figure 7.7 shows the assessment by the respondents how well the knowledge needed was available to them.

Respondents were asked to rate the extent that they perceived they had full access to the information and knowledge they needed to fulfill their job. Employees of High Performing NGOs were more confident (100% agree) than employees of Low Performing NGOs where only 58%% of the respondents agreed. The remaining respondents in were either not sure (25%) or disagreed (17%) with the statement. The assessment of the accessibility to the information and knowledge needed by the respondents is reflected in Figure 7.8.

7.2.2 Knowledge Creation: In the third section of the survey data was collected to evaluate the human capital (employee satisfaction: HC/ES1, HC/ES2 and HC/ES3) as well as structural (organizational processes: SC/OP2) of the organizations through assessment of the knowledge creating sources of the organization. More specifically, knowledge creation was assessed using questions to determine the extent that respondents believed the organization provided them with the necessary sources to create knowledge as well as opportunities for training (internal and external) in order to enhance knowledge. Additionally, one question aimed to find out which sources were used most for creating knowledge (structural capital).

In the studied Low Performing NGOs the level of satisfaction for knowledge creating resources provided by the organizations ranged from strongly agrees (11%), to disagree (29%). The level of satisfaction was much Higher in High Performing NGOs with a 100% agreeing that they were satisfied that the organization provided them with sufficient knowledge resources to create knowledge needed to fulfill their job.

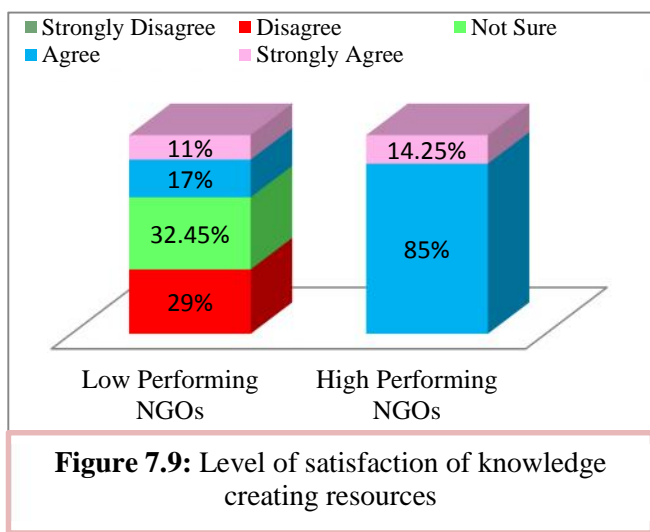**Figure 7.9:** Level of satisfaction of knowledge creating resources

Figure 7.9 shows the level of satisfaction with the knowledge creating resources provided by the organization and assessed by the respondents.

Employees of the studied High Performing NGOs reported a High satisfaction with internal and external training provided by the organizations compared to employees of Low Performing NGOs. In total, 83% of the employees of High Performing NGOs agreed to strongly agreed that the organization provided them with opportunities for internal and 75% employees agreed to strongly agreed that they got external training on a regular basis, and only 33.33% either were not sure (for internal training) or disagreed (for external training). On the other hand, only 22.89% of the employees of Low Performing NGOs strongly agreed or agreed that the organization provided them with opportunities for internal training and 36% agreed that the organizations provided opportunities for external training. Over 60% of the employees were not satisfied with the opportunities provided for internal training and 64% of the employees were not satisfied with the opportunities provided for external training. The level of satisfaction with internal and external training opportunities provided by the organization and rated by the respondents is presented in Figure 7.10.
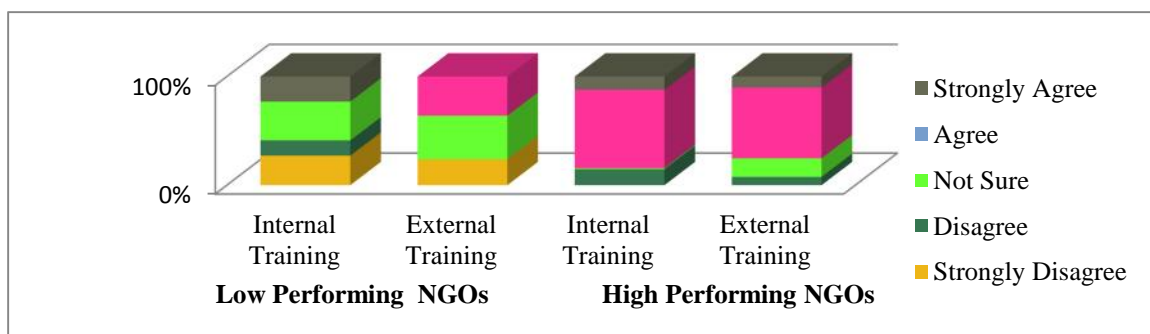
Figure 7.10: Level of satisfaction with training opportunities provided by the organization

The respondents were asked to indicate which internal and external sources they used most for creating knowledge by choosing only the three most favored sources. Respondents from Low Performing NGOs (over 70%) reported using mainly external sources (such as the internet, external databases, external experts or publications) to create new knowledge. In contrast, respondents from High Performing NGOs reported relying more (over 65%) on internal resources (for example internal databases, colleagues or intranet) for creating new knowledge. Figure 7.11 shows the distribution and importance of sources for knowledge creation.

Figure 7.11: Sources for creating knowledge

7.2.3 Information/Knowledge Sharing: Data was collected to evaluate the structural capital (organizational processes: SC/OP2) and relational capital (RC1 to RC4) of the organizations. Respondents were asked to rate the extent that they shared knowledge and with whom they shared their knowledge. Addit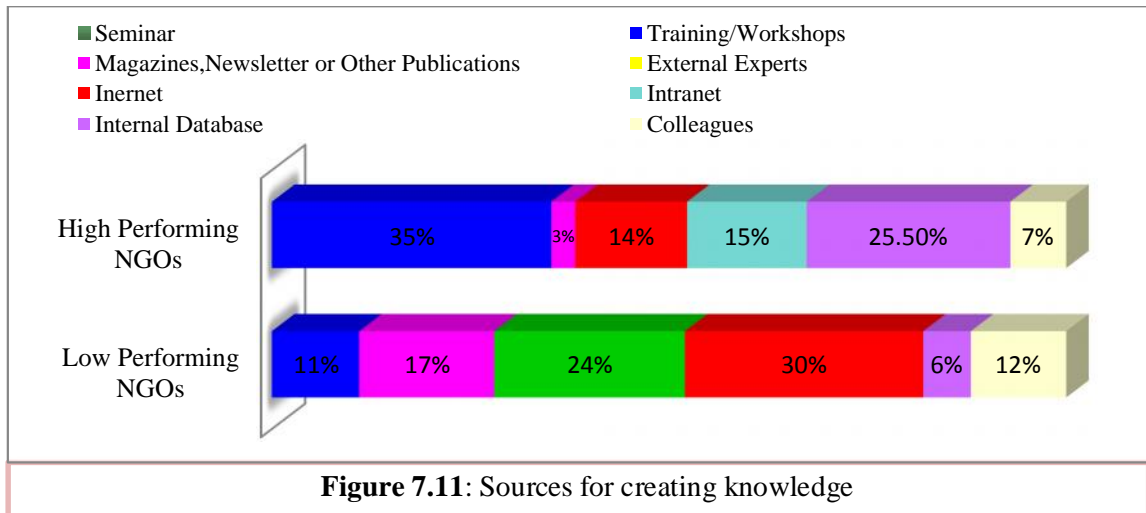ionally, respondents were asked to indicate the flow of knowledge sharing (codified or personalized) and the content of the information/knowledge shared (related to office tasks or related to administrative tasks).

In regards of the level of intensity with which the employees of the studied Low Performing NGOs and High Performing NGOs share knowledge, the results indicated that employees in both types of organizations had a high level of sharing with colleagues within the office (100% either strongly agreed or agreed to this statement). Differences were evident with respect to the intensity that respondents shared information or knowledge with others outside the office. Only 33% of the respondents from Low Performing NGOs strongly agreed or agreed with respect to sharing information and knowledge with staff from the head office as well as with staff of the funding organization, while Respondents from High Performing NGOs reported a high level of sharing (100% strongly agree or agree to these statements) with these two groups. Table 7.3 summarizes the results for the question with which the respondents share knowledge.

Table 7.3: Level of intensity of information and knowledge sharing

Sharing with whom	Level of intensity of sharing	Low Performing NGOs Info/ Knowledge	High Performing NGOs Info/ Knowledge
Colleagues in office	Strongly agree	33%	33%
	Agree	66%	66%
	Not sure	0%	0%
	Disagree	0%	0%

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	Strongly Disagree	0%	0%
Colleagues in other local offices	Strongly agree	0%	0%
	Agree	33%	33%
	Not sure	22%	33%
	Disagree	33%	33%
	Strongly Disagree	11%	0%
Staff of HQ	Strongly agree	0%	67%
	Agree	33%	33%
	Not sure	0%	0%
	Disagree	67%	0%
	Strongly Disagree	0%	0%
Staff of Funding Organization	Strongly agree	11%	33%
	Agree	22%	67%
	Not sure	33%	0%
	Disagree	33%	0%
	Strongly Disagree	0%	0%
Staff of other related Organizations	Strongly agree	0%	0%
	Agree	67%	67%
	Not sure	0%	0%
	Disagree	22%	33%
	Strongly Disagree	11%	0%

In relation to knowledge sharing with others, the respondents were also asked what kinds of information and knowledge (office tasks or administrative tasks related) and how (codified and/or personalized) they shared this information and/or knowledge with others (see Table 7.4).

As can be seen in Table 7.4, the highest level of information and knowledge sharing in both types of organizations was found amongst colleagues within the office. There was no clear structure about differences between codified or personalized approach or between office related or administrative related information or knowledge sharing in both organizations when sharing with colleagues within the office. On the other hand, the results for information and knowledge sharing with colleagues in other local offices, with staff in the head office and with staff of the funding organization showed an evident difference. While respondents from Low Performing NGOs preferred a personalized approach for sharing their knowledge with others outside the office, respondents from High Performing NGOs showed a clear preference for a codified approach to share their knowledge with these groups. Both type of organizations preferred a personalized approach when sharing information and knowledge with staff of other related

organizations. In both type of organizations, information shared with others was more office task-related than administrative task-related. A different and much unstructured pattern was revealed by the results in terms of what type of knowledge was shared. Low Performing NGOs shared more knowledge regarding administrative tasks with colleagues within the office and staff from the head office. These respondents also reported sharing knowledge related to organizational tasks more with colleagues from other offices. Respondents from High Performing NGOs reported that they shared more administrative knowledge than office-related task with colleagues within the office and with staff of the head office more office task related knowledge. These respondents also reported that they shared both - office task and administrative task related knowledge - equally with colleagues of the other local offices and with staff of the funding organizations.

Table 7.4: Preferred Flow of information and knowledge sharing

Sharing with whom	Content and flow		Low Performing NGOs		High Performing NGOs	
			Info	Knowledge	Info	Knowledge
Colleagues in office	Office tasks related	Codified	78%	56%	33%	67%
		Pers.	100%	89%	100%	33%
	Admin tasks related	Codified	78%	67%	100%	67%
		Pers.	56%	89%	33%	67%
Colleagues in other local offices	Office tasks related	Codified	22%	11%	33%	33%
		Pers.	33%	33%	33%	0%
	Admin tasks related	Codified	22%	11%	33%	33%
		Pers.	22%	22%	0%	0%
Staff of HQ	Office tasks related	Codified	22%	22%	100%	100%
		Pers.	11%	0%	67%	67%
	Admin tasks related	Codified	22%	22%	100%	67%
		Pers.	11%	11%	33%	67%
Staff of Funding Organizations	Office tasks related	Codified	33%	22%	100%	100%
		Pers.	44%	44%	33%	33%
	Admin tasks related	Codified	22%	22%	100%	100%
		Pers.	33%	33%	33%	33%
Staff of other related organizations	Office tasks related	Codified	11%	22%	0%	0%
		Pers.	56%	67%	67%	67%
	Admin tasks related	Codified	22%	0%	0%	0%
		Pers.	56%	56%	0%	0%

7.3 Overview about the KM infrastructure classification for High Performing NGOs and Low Performing NGOs: Here the main theme of investigation rests on the relation between the different elements of the KM infrastructure.

The analysis of the results of the interviews and in-depth document research shows Low Performing NGOs to be mainly described by characteristics which are typically related to an Adhocracy culture type. The overall organizational cultures of these NGOs are described as result oriented (Market) supported by entrepreneurial behavior (Adhocracy). Characteristics for an Adhocracy culture type can also be found in leaderships which are portrayed as innovative, in management of employees which can be described as individual risk- taking, and in strategic emphasis where the creating of new challenges is important. The analysis of the results of the items in respect to organizational structures lead to the conclusion, that studied Low Performing NGOs were more decentralized than centralized organizations, since the locus of the power to make the main decisions is mainly within the local offices. The results of the items in respect to IT support show that even support for information and knowledge sharing and acquisition is provided, the content of the database is not sufficient to handle daily tasks and the database is not accessible for all employees. An overview of the summary of the results for the measurements of the KM infrastructure as well as the responding classification for studied Low Performing NGOs is presented in Table 7.5.

On the other hand, cross analysis of the results of the interviews and in-depth document research demonstrates that studied High Performing NGOs are described mainly by characteristics which are typically related to a Hierarchy culture type. The overall organizational cultures of these NGOs are described as result oriented (Market) supported by processes (Hierarchy). Characteristics for a Hierarchy culture type can also be found in leadership which is portrayed as coordinating and organizing, in management of employees which can be described job safety and stability, and in strategic emphasis where an efficient and smooth operation is important. The analysis of the results of the items in respect to organizational structures lead to the conclusion, that studied High Performing NGOs are more centralized than decentralized, since the locus of the power to make the main decisions is mainly within the head office. The results of the items in respect to IT support show that these NGOs have stronger IT support than studied Low Performing NGOs, especially in richness of the content and accessibility of the databases.

An overview of the summary of the results for the measurements of the KM infrastructure as well as the responding classification for studied is presented in Table 7.5.
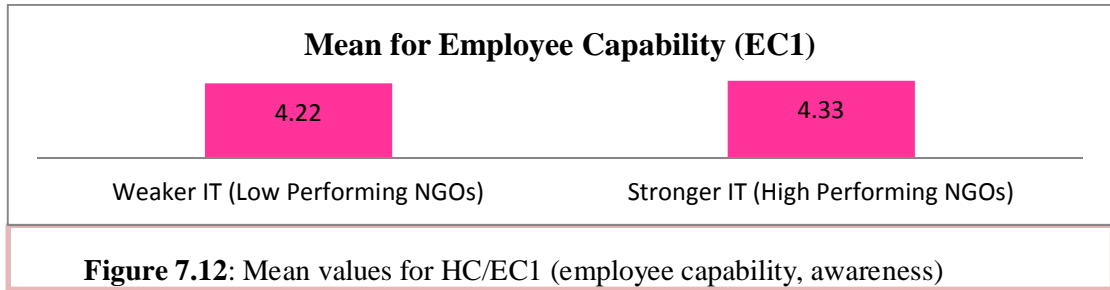
Table 7.5: Overview about the KM infrastructure classification for High Performing NGOs and Low Performing NGOs

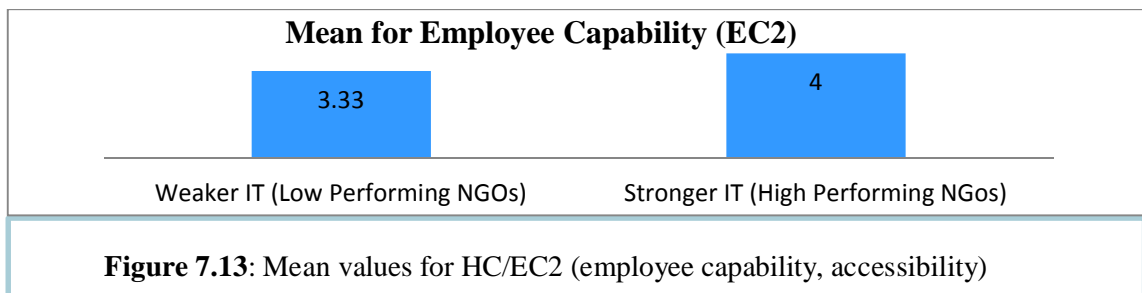|	High Performing NGOs		Low Performing NGOs	
KM Infrastructure	**Results of Measurement**	**Classification**	**Results of Measurement**	**Classification**
Organizational Culture	result oriented/governed by formal procedures => Market/Hierarchy coordinating and organizing => Hierarchy security and stability => Hierarchy efficiency and smooth operation => Hierarchy	Primarily Hierarchy culture	result oriented/entrepreneurial => Market/Adhocracy innovative => Adhocracy individual risk-taking => Adhocracy creating new challenges => Adhocracy	Primarily Adhocracy culture
Organizational Structure	the head office has to be consulted for most actions; most decisions need the approval of the head office; need to refer to someone else is likely	More Centralized	most actions can be taken without consulting the head office; most decisions can be made without the approval of the head office; need to refer to someone else is rare	More Decentralized
IT support	IT support for information and knowledge sharing is provided; IT support for information and knowledge acquisition is provided; IT support for information finding and accessing is provided; Richness and usefulness of content is seen as very good; Databases are accessible for all staff members	Stronger	IT support for information and knowledge sharing is provided; IT support for information and knowledge acquisition is provided; IT support for information finding and accessing is provided; Richness and usefulness of content is seen as not sufficient Databases are not accessible for all staff members	Weaker

7.4 Impact of the level of IT support on the different levels of IC (human, structural and relational capital):

i. Results for Human Capital : In total six items were used to assess human capital: two items assessed employee capability (HC/EC1 and HC/EC2), three items assessed employee satisfaction (HC/ES1 to HC/ES3) and one item assessed employee sustainability (HC/ESu1).

The mean values for HC/EC1 of organizations with weaker (M=4.22; SD=0.44) or stronger (M=4.33; SD=0.57) IT support are demonstrated in Figure 7.12 and show that there is barely any difference in the mean values.

Mean for Employee Capability (EC1)

4.22	4.33
Weaker IT (Low Performing NGOs)	Stronger IT (High Performing NGOs)

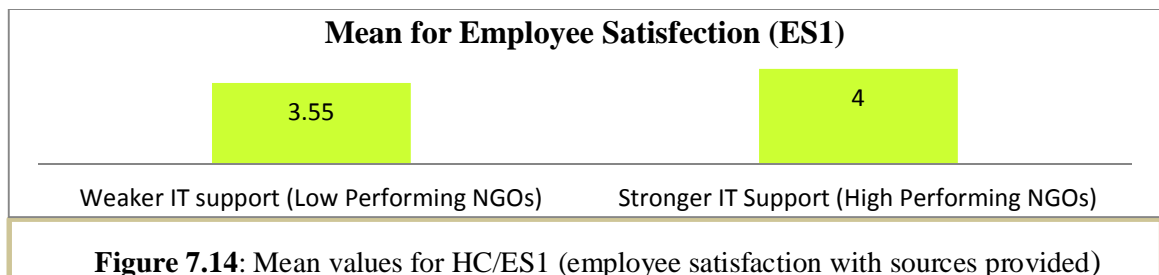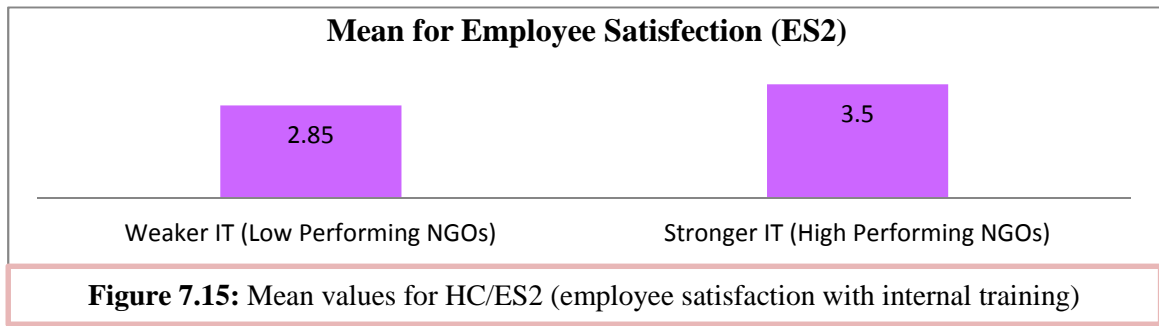**Figure 7.12**: Mean values for HC/EC1 (employee capability, awareness)

Furthermore, the mean values for HC/EC2 of organizations with weaker (M=3.66; SD=0.7) or stronger (M=4.0; SD=0.0) IT support are demonstrated in Figure 7.13 and show that the organization with a stronger IT support has a minimal High mean value for HC/EC2 than the organization which has a weaker IT support.

Mean for Employee Capability (EC2)

3.33	4
Weaker IT (Low Performing NGOs)	Stronger IT (High Performing NGos)

Figure 7.13: Mean values for HC/EC2 (employee capability, accessibility)

The means for HC/ES (employee satisfaction) for organizations with weaker and stronger IT support were through three different items (HC/ES1, HC/ES2 and HC/ES3). The difference between the organizations in respect to the mean values for employee satisfaction is more evident than the difference in respect to employee capability and shown in Figure 7.14 (HC/ES1), Figure 7.15 (HC/ES2) and Figure 7.16 (HC/ES3).

The result shows a Low mean value for HC/ES1 for the organization with a weaker IT support (M=3.55; SD=1.01) than for the organization with a stronger IT support (M=4.0; SD=0.0), as demonstrated in Figure 7.14.

Mean for Employee Satisfection (ES1)

3.55	4
Weaker IT support (Low Performing NGOs)	Stronger IT Support (High Performing NGOs)

Figure 7.14: Mean values for HC/ES1 (employee satisfaction with sources provided)

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**Figure 7.15:** Mean values for HC/ES2 (employee satisfaction with internal training)

Furthermore, the result shows a Low mean value for HC/ES2 for the organizations with weaker IT support (M=2.85; SD=1.22) than for the organization with a stronger IT support (M=3.5; SD=0.57), as shown in Figure 7.15.

In case of Employee satisfaction with external training, low performing NGOs with weaker IT support have low mean (M=2.75; SD= 1.07) than for the high performing NGOs with stronger IT support (M= 3.4; SD= 0.45), as shown in figure 7.16.

Figure 7.16: Mean values for HC/ES3 (employee satisfaction with external training)
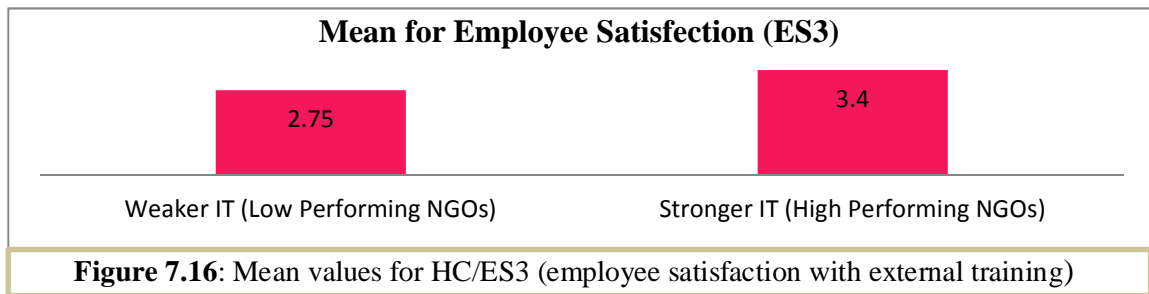
The results regarding the employee sustainability show that respondents in both type of organizations showed a high sustainability rate when comparing the number of years of work experience to the number of years in the organization (see Table 7.6)

Table 7.6: Overview about the years of work experience and related years in the organization listed by respondents

Respondents of	Break Up	Work experience	Years in the organization
Low Performing NGOs (20 respondents)	3	< 5 years	2-5 years
	5	11-15 years	6-10 years
	2	16-20 years	11-15 years
	4	5-10 years	6-10 years
	6	> 20 years	11-15 years
High Performing NGOs (42 respondents)	6	5-10 years	6-10 years
	21	16-20 years	> 15 years
	15	> 20 years	> 15 years

The results, collected through the survey, for measuring Human Capital through employee capability, employee satisfaction and employee sustainability are summarized in Table 7.7. Based on the results, only one of the measurement items for human capital (employee satisfaction) has a High result for the Non-governmental organization which
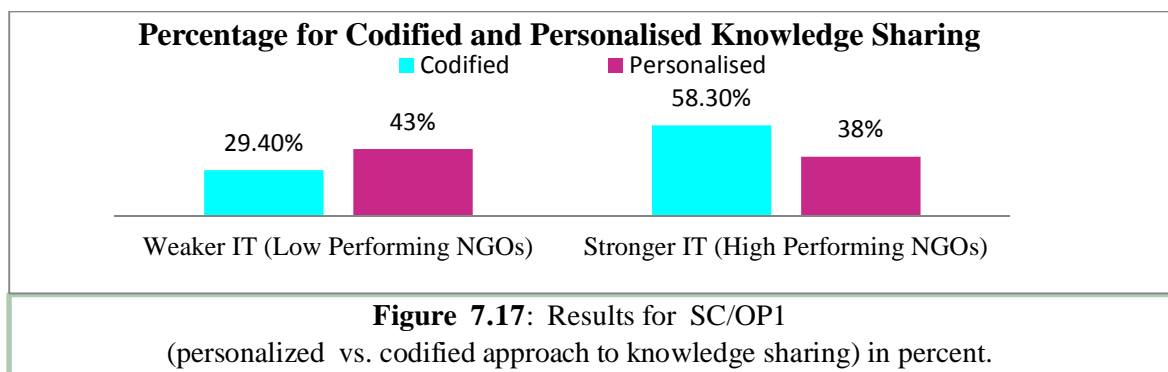
has a strong IT support. Two of the measurement items (employee capability and employee sustainability) don't have a clear result.

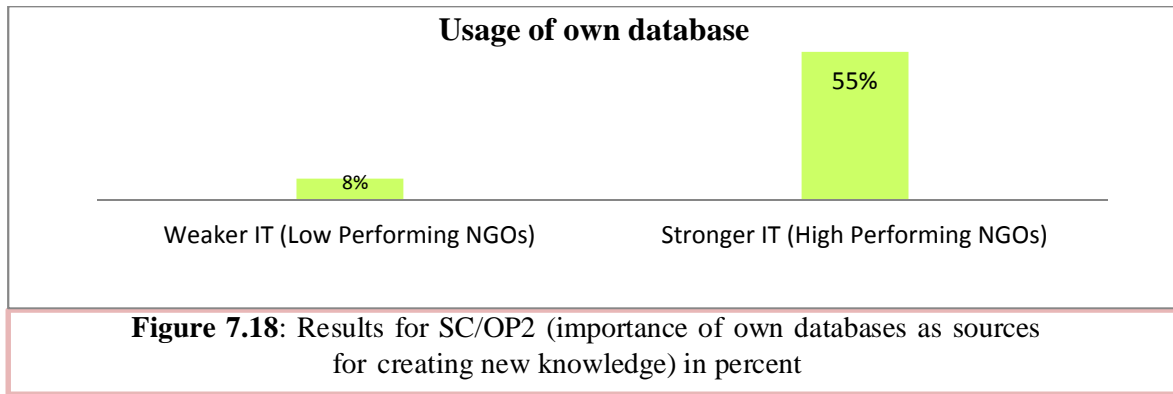**Table 7.7**: Overall results for measuring Human Capital

Item measure	Organization with weak IT support	Relation	Organization with strong IT support
Employee Capability (Figure 7.13; Figure 7.14)	almost the same	=	almost the same
Employee Satisfaction (Figure 7.15; Figure 7.16; Figure)	Low	<	High
Employee Sustainability (Table 7.6)	not clear		

ii. Results for Structural Capital: In total four items were used to assess structural capital. Two items assessed organizational processes (SC/OP1and SC/OP2), and two items assessed IT systems (SC/ITS1 and SC/ITS2).
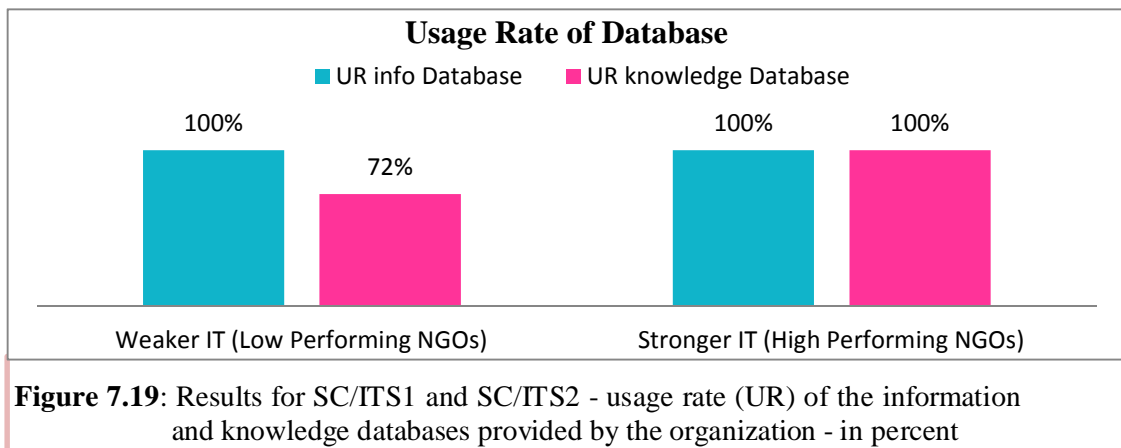
The results for SC/OP1 (codified vs. personalized approach to knowledge sharing) of organizations with weaker (Low Performing NGOs) or stronger (High Performing NGOs) IT support are shown in Figure 7.17 as percentages. The results of the survey demonstrated that the organization with a stronger IT support used more a codified approach (58.3%) than a personalized approach (38%) for sharing knowledge with others. On the other hand, the organization with a weaker IT support used less a codified approach (29.4%) than a personalized approach (43%) for sharing knowledge with others.

Percentage for Codified and Personalised Knowledge Sharing

■ Codified   ■ Personalised

29.40%   43%   58.30%   38%

Weaker IT (Low Performing NGOs)   Stronger IT (High Performing NGOs)

Figure 7.17: Results for SC/OP1
(personalized vs. codified approach to knowledge sharing) in percent.

The importance of the organization's own database as source for creating new knowledge (SC/OP2) is illustrated in percentage in Figure 7.18. While 55% of the respondents of the organizations with a strong IT support use their own databases as a source for knowledge creation, only 8% of the respondents of the organizations with a weak IT support use their own databases for this purpose.

Usage of own database

| Weaker IT (Low Performing NGOs) | Stronger IT (High Performing NGOs) |
| 8% | 55% |

Figure 7.18: Results for SC/OP2 (importance of own databases as sources for creating new knowledge) in percent

Two items assessed structural capital based on the usage rate of each organization's own information (SC/ITS1) and knowledge (SC/ITS2) databases. The results for these measures are illustrated in Figure 7.19 and show that while both organizations have information and knowledge databases (100%), only the organization with stronger IT support had a usage rate of 100% for both (information and knowledge) databases.

Usage Rate of Database

■ UR info Database   ■ UR knowledge Database

| Weaker IT (Low Performing NGOs) | | Stronger IT (High Performing NGOs) | |
| 100% | 72% | 100% | 100% |

Figure 7.19: Results for SC/ITS1 and SC/ITS2 - usage rate (UR) of the information and knowledge databases provided by the organization - in percent

The results for measuring structural capital through the ratio codified/personalized knowledge sharing, importance of the organizations' own database and the usage rates of the organizations' own databases are summarized in Table 7.8.

Table 7.8: Overall results for measuring Structural Capital

Item measure	IT support weaker	Relation	IT support stronger
codified vs. personalized approach (Figure 7.18)	Low	<	High
importance of the own databases (Figure 7.19)	Low	<	High
usage rate of information database (Figure 7.20)	Same	=	Same
usage rate of knowledge database (Figure 7.20)	Low	<	High

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iii. Results for Relational Capital: In total four items assessed relational capital. One item assessed relations with colleagues to other local offices (RC1), one item assessed relations with staff of the head office (RC2), one item assessed relation with staff of the funding organization (RC3) and one item assessed relation with staff of other related organizations (RC4).

The mean value for RC1 (knowledge sharing with colleagues in other local offices) can be found in Figure 7.20 and shows that respondents of the organization with a weaker IT support (M=2.78; SD=1.19) had slightly a Low level of knowledge sharing with colleagues in other local offices than those with a stronger IT support (M=3.0; SD=1.0).
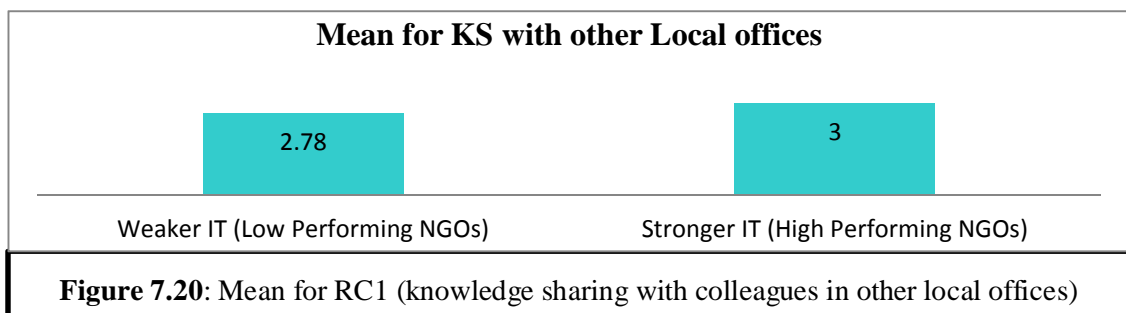
Mean for KS with other Local offices

2.78	3
Weaker IT (Low Performing NGOs)	Stronger IT (High Performing NGOs)

Figure 7.20: Mean for RC1 (knowledge sharing with colleagues in other local offices)

Figure 7.21 shows the mean value for RC2 (knowledge sharing with staff of the head office). Again, respondents of the organizations with a weaker IT support (M=2.67; SD=1.0) had a much Low level of knowledge sharing with staff of the head office than those of the organizations with a stronger IT support (M=4.50; SD=0.57).
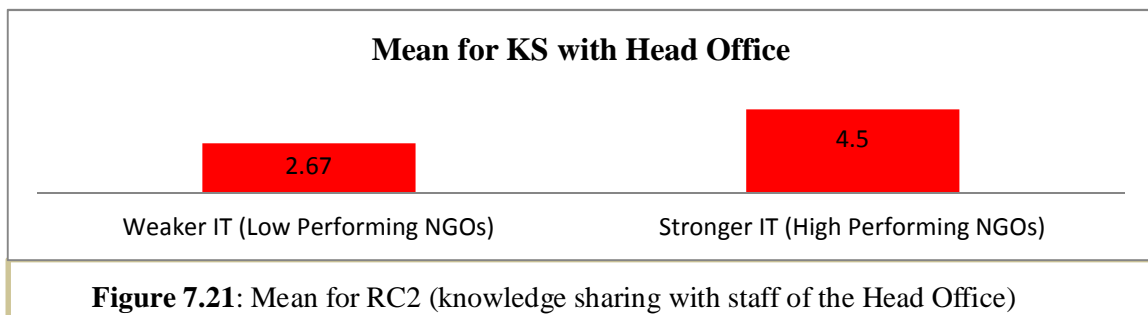
Mean for KS with Head Office

2.67	4.5
Weaker IT (Low Performing NGOs)	Stronger IT (High Performing NGOs)

Figure 7.21: Mean for RC2 (knowledge sharing with staff of the Head Office)

The mean value for RC3 (knowledge sharing with staff of the funding organizations) is shown in Figure 7.22 and demonstrates that respondents of the organizations with a weaker IT support (M=3.11; SD=1.05) have also a much Low level of knowledge sharing with staff of the funding organizations than those with a stronger IT support (M=4.33; SD=0.57).
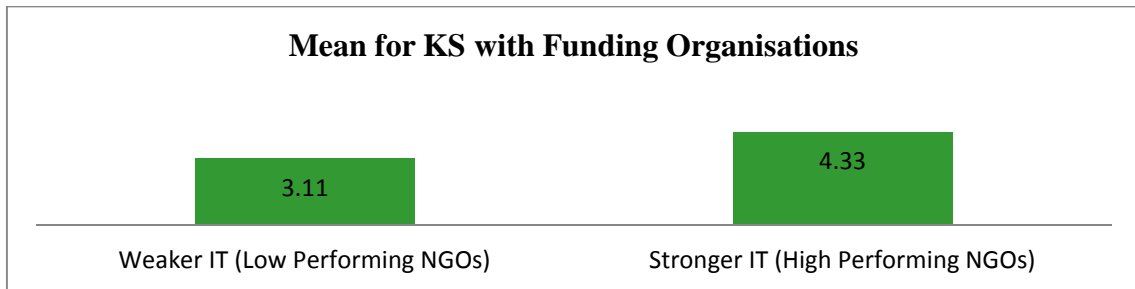
Mean for KS with Funding Organisations

3.11	4.33
Weaker IT (Low Performing NGOs)	Stronger IT (High Performing NGOs)

Figure 7.22: Mean for RC3 (knowledge sharing with staff in the funding organization)

The mean value for the last item measure of relational capital, RC4 (knowledge sharing with staff of other related organizations) is demonstrated in Figure 7.23 and shows that the level of knowledge sharing was only slightly Low for respondents of the organization with a weaker IT support (M=3.22; SD=1.2) than for respondents of the organization with a stronger IT support (M=3.50; SD=1.15).
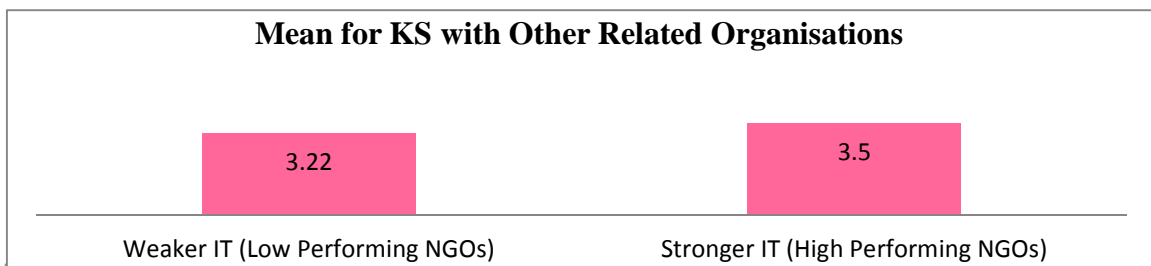
Mean for KS with Other Related Organisations

3.22	3.5
Weaker IT (Low Performing NGOs)	Stronger IT (High Performing NGOs)

Figure 7.23: Mean for RC4 (knowledge sharing with staff of other related organizations)

Overall, the results for measuring relational capital through knowledge sharing with other stakeholders are summarized in Table 7.9. All four of the measurement items for relational capital show a High level for the organizations which have strong IT supports.

Table 7.9: Overall results for measuring Relational Capital

Item measure	IT support weaker	Relation	IT support stronger
knowledge sharing relation with colleagues in other local offices (Figure 5.27)	same	=	same
knowledge sharing relation with staff in the head office (Figure 5.28)	Low	<	High
knowledge sharing relation with staff in the funding organization (Figure 5.29)	Low	<	High
knowledge sharing relation with staff in other related organizations (Figure 5.30)	same	=	same

An overview of the characteristics which result from the evaluation of the KM infrastructure (see Table 7.5) through the interviews with representatives of the participating organizations are shown in Table 7.10.

Table 7.10: Overview about characteristics of the organizations

	High Performing NGOs	Low Performing NGOs
Organizational Culture	Hierarchy Culture	Adhocracy Culture
Organizational Structure	Centralized	Decentralized

i. The level of IT support was high within the organization with a Hierarchy culture type than in the organization which was characterized through an Adhocracy culture type.

ii. The level of IT support is high within the organization with a centralized Organizational structure than in the organization with a decentralized structure.

The results are further supported by the data gathered through the quantitative analysis (survey). Stronger IT supports in this study were characterized by databases with high accessibility, were easy to use, and with content in accordance to usefulness and relevance of the information and knowledge stored in the databases. The results of the survey revealed that respondents of High performing NGOs (Hierarchy culture and centralized structure) were more confident to have the information and knowledge needed to fulfill their job always available and accessible than respondents of Low performing NGOs (Adhocracy culture and decentralized structure). Furthermore, in respect to usefulness and relevance of the information and knowledge stored in the databases, the results of the survey revealed that respondents of High performing NGOs seem to be more confident with the content of the databases and demonstrate a High usage rate as well as using their own databases more often for creating new knowledge than respondents of Low performing NGOs.

iii. Non-governmental organization which characterized by stronger IT support would have a High level of employee satisfaction than Non-governmental organization characterized by less strong IT support.

iv. Non-governmental organization which had a stronger IT support would have a High level of structural capital than a Non-governmental organization which had a less strong IT support. The results revealed that organizations with a strong IT support use more a codified approach of sharing knowledge than organizations which had a less strong IT support. Also, these organizations used their own databases as an instrument for knowledge acquisition and creation of knowledge more often than organizations which have a less strong IT support. While the usage rate for the information databases are similar in both organizations, the organization with the stronger IT support uses the knowledge database more often than the organization with less strong IT support. In total, three out of the four measurement items (codified approach, importance of the own

database, usage rate of information and knowledge database) showed a High level for the organization which has a stronger IT support and only one measurement item shows an equal level.

Structural capital is described as the pool of knowledge that remains in an organization at the end of the day after individuals within the organization have left such as databases, process manuals, strategies, routines, publications and copyrights. The interviews as well as the review of the data bases disclosed that High performing organizations provides data base with more content than the data base of Low performing organizations.

v. The results for measuring relational capital through knowledge sharing with other stakeholders are seen that two of the four measurement items for relational capital show a High level for the organization which has a stronger IT support and two measurement items show almost the same result.

vi. The interviews exposed that the access to the data base of Low performing organization is limited while the data base of High performing organization is accessible to all employees.

Furthermore, High performing NGOs also provides access to the data base for staff of the funding organizations which makes it easier to share information and knowledge.

This chapter explained about KM Infrastructure, its relation with IT and organizational performance of the studied NGOs. It is seen that organizations with Stronger IT support perform better than Weaker IT support.