



Advantages and disadvantages of the transfer or exchange of information across country borders

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1 Introduction

There are two forms of knowledge, namely tacit and explicit knowledge. For the purpose of this research report the value of explicit knowledge is discussed as.

According to Noor-ud-din (2001:1), 'we are moving rapidly towards a state with boundaries between countries becoming blurred and where communication is instantaneous as people are connected 24 hours a day. Information and services are becoming available to everyone willing to acquire it instantly. This mode of delivery has made cross border trade easier and faster.' Africa is undergoing a rapid transformation process and, by the year 2010, information exchange across country boundaries will benefit the organizations based in South Africa, specifically in the areas of political, economic, social and technical environments.

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2 Transfer of information and knowledge

2.1 Mechanisms for transferring information

The mechanisms for transferring information are listed in Table 1. The correct usage of

these mechanisms is critical for an organization wanting to conduct business outside of its own borders. Table 1 explains the mechanisms and advantages and disadvantages of each pertaining to the flow of information.

Within the modern information age, information flow has been made practical and accessible, making it easier for organizations to conduct business across country borders, be it in the first world or remote developing areas.

Table 1 Flow of information

Mechanisms	Advantages	Disadvantages
1. Telephone	<ul style="list-style-type: none"> • Land line costing • Real time • Conveys verbal information 	<ul style="list-style-type: none"> • Not mobile / restricted to a specific location
1.1 - Telephone conference	<ul style="list-style-type: none"> • Real time • Cost: of a telephone call versus the expense of booking air tickets, hotels and car hire. • A group of people can participate • Conveys verbal information 	<ul style="list-style-type: none"> • Cannot see reactions • Cannot see who is listening
1.2 - Cell phones	<ul style="list-style-type: none"> • Real time • Location = mobile 	<ul style="list-style-type: none"> • Cell phone rates • The transmission signal can be broken • The network provider could be down • Must be in the vicinity of a cell phone transmission antenna
A + Short message service (SMS)	<ul style="list-style-type: none"> • The recipient can read the correspondence 	<ul style="list-style-type: none"> • Limited to 160 characters.
B + Wide Area protocol (WAP)	<ul style="list-style-type: none"> • B. Convenient to send information from a laptop using the cell phone signal 	<ul style="list-style-type: none"> • High cost
1.3 - Satellite phone	<ul style="list-style-type: none"> • Very good form of communication in a remote area • Convenient where there is no cell phone network or no land lines 	<ul style="list-style-type: none"> • Cumbersome in the time spent to set up but portable • Costly • Illegal in certain countries
2. The Internet	<ul style="list-style-type: none"> • Opens up a world of instant information 	<ul style="list-style-type: none"> • Must have a computer

	<ul style="list-style-type: none"> and knowledge World wide transmission of information 	<ul style="list-style-type: none"> Must be linked to a service provider Sift through a lot of information to find what you are really interested in Costly
2.1 Intranets	<ul style="list-style-type: none"> Good for internal organisation information and knowledge storage 	<ul style="list-style-type: none"> Information is only available from inside the organisation
2.2 Extranets	<ul style="list-style-type: none"> If the organisation is located in five different countries this is a good means of keeping employees up-to-date with information 	<ul style="list-style-type: none"> Security violation
2.3 Audio Teleconferencing	<ul style="list-style-type: none"> Costs a single telephone. More flexible because of the hardware costs. 	<ul style="list-style-type: none"> Cannot see reactions. Cannot verify participants
2.4 Video Teleconferencing	<ul style="list-style-type: none"> A visual contact is made between the participants. Free discussion can take place. Concepts can be illustrated. 	<ul style="list-style-type: none"> Hardware costs. Protocol.
3. Mail		
3.1 – Postal	<ul style="list-style-type: none"> Correspondence is vital to an organisation such as the University of South Africa, as they have a number of students that correspond via the postal system with hard copies for their education. 	<ul style="list-style-type: none"> Time consuming. Documentation can disappear into the abyss. The time that lapses can be a long period before this is realised.
3.2 - Electronic mail (e-mail)	<ul style="list-style-type: none"> Communication is almost instantaneous Documents can be attached to an e-mail 	<ul style="list-style-type: none"> Need to be connected via a computer

4. Television	<ul style="list-style-type: none"> • Immediate coverage of global events. 	<ul style="list-style-type: none"> • One way communication • Immediate coverage of global events. • Editorial news can present a single sided story.
5. Direct person to person	<ul style="list-style-type: none"> • Interpersonal interaction. 	<ul style="list-style-type: none"> • Costs based on distance i.e. travel, hotels and car hire.
6. Hard copies of documentation	<ul style="list-style-type: none"> • The original documentation / certified originals. 	<ul style="list-style-type: none"> • Courier time and costs involved.
7. Audio Tapes	<ul style="list-style-type: none"> • Advantages lie in distance learning institutions. 	<ul style="list-style-type: none"> • Outdated method of transmitting information. • One-way communication.
8. Audio Compact Disks (CD'S)	<ul style="list-style-type: none"> • According to Behrens (1994:21) "... the amount of data which can be stored on the disk... relatively inexpensive to produce large quantities." 	<ul style="list-style-type: none"> • One way communication.
8.1 - Compact Disk-Read Only Memory (CD-ROM)	<ul style="list-style-type: none"> • Keep information on a CD-ROM database. According to Behrens (1994:21) "... provides visual information in the form of text or graphics on a screen. The information on the screen can then be printed out onto paper via a printer attached to the computer system." 	<ul style="list-style-type: none"> • One way communication • The CD needs to be couriered to the desired venue.
9. Electronic documentation		
9.1 - Word processor	<ul style="list-style-type: none"> • Can be edited 	<ul style="list-style-type: none"> • Requires identical

documents, spreadsheets.	<ul style="list-style-type: none"> • Track changes • Two-way form of communication, the document can be returned to sender. • Real time – send via e-mail. 	software on both ends of transmission.
9.2 - Portable document format (PDF)	<ul style="list-style-type: none"> • Not editable. • Can be printed out. • Can be down loaded off the internet or via e-mail. • Regarded as a universal format. 	<ul style="list-style-type: none"> • One way form of communication.
10. Digital Video Disks (DVD'S)	<ul style="list-style-type: none"> • Can support multiple data formats. 	<ul style="list-style-type: none"> • Hardware – DVD reader • Hardware – DVD writers are costly.

2.2 Levels of information/knowledge transfer

Organizations can transfer information and knowledge in a number of different levels each having its own value for both the organization and the recipient. The organization would accomplish this by utilizing one or more of the mechanisms listed in Table 1.

2.2.1 Product

An organization can sell a completed product to another organization across country borders without having to divulge any know-how or the way the product was manufactured. This is the lowest level of conducting information transfer between countries. When an information organization within South Africa installs an off-the-shelf information management system, it can withhold information regarding how the system was developed and how it can be serviced.

How can the South African organization benefit from this transaction?

- The development has already taken place as it is an off-the-shelf product.
- The information pertaining to servicing of the product, which in this instance is an information management system, can be further sold to the recipient organization at a nominal fee but would come in a package such as a South African consultant who would in fact go to the recipient country to service the product.
- Make profit.

How would the recipient organization outside the South African borders benefit?

- They receive an off-the-shelf information management system, which they can apply to their organization.
- They don't have to train a whole division to design and manufacture the product.
- They don't have to waste time and resources on servicing the product.

2.2.2 Service

The organization can compile a product. The outcome here is that the organization in South Africa withholds information and knowledge regarding how the data was gathered and

analysed from an information audit.

How can the South African organization benefit from this transaction?

- It develops a custom information audit for the specific use of the recipient organization, further developing their levels of expertise within the field of information auditing.
- They make a profit, as this is a custom-designed package.
- They hold the valuable information and knowledge pertaining to the design.
- They can also send out consultants to service the information audit. This assists the information consultants in dealing with a number of different scenarios, which will assist them and the organization with future dealings with companies.

How would the recipient organization outside the South African borders benefit?

- They receive a customized information audit package.
- They don't have to train a whole division to design and manufacture the product. This gives a quicker implementation of the information policy.
- They don't have to waste time and resources on servicing the product.
- It adds profit to their bottom line, as their organization will now function in a more controlled manner.

2.2.3 Technical transfer

The organization that has conducted the design and manufacture of a product together with the client organization then hands over, at a premium, the information of how the product was designed and manufactured.

How can the South African organization benefit from this transaction?

- They can learn from the expertise with the recipient organization.
- They can make a profit.
- Potential future co-operations can be cemented.

How would the recipient organization outside the South African borders benefit?

- They can learn from the organization, as they may not have all the experience concerning the implementation and design of an information audit.
- They can use the information and knowledge to further their own understanding and development of information auditing.
- They can, in future, develop their own skills from the information and contact made.

2.2.4 Training

An organization can educate new markets in other countries on the 'how to' at a premium. In this manner the organization is equipping the employees within the organization situated in a different country to stand on their own feet. They can thus produce and manage and develop at their own free will.

How can the South African organization benefit from this transaction?

- Specialized training on offer, at a high premium
- Enhances employee skills, taking employees to a higher level of understanding.

How would the recipient organization outside the South African borders benefit?

- They can in future develop their own skills from the information and contact made.
- In the future, they don't have to pay exorbitant fees for products such as this as they will have the skills and training to do this for themselves. They can then supply the service to other companies.

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3 Information exchange across country borders

The exchange of information is a healthy commodity for any country to have in order for the country to survive in the global environment. The following concepts are imperative to this:

3.1 Information and communications technology (ICT)

According to Summaries of ADF '99... (1999:209) and with regard to information distribution in Africa 'the systems that control information are systems that understand the ramification and importance of information and its use'. The use and understanding of information is important for governments to utilize in the way a country is governed, which will ultimately impact on the country's revenue.

3.2 Capacity to export

Globalization requires products to be bought and sold all over the world and, in order for organizations to do this, they need to export their wares. According to Global Information Economy (1997), the Australian information industries will need to maximise and improve market access by conducting the following domestic related factors: 'The export readiness of information industries firms; The provision of competitive finance packages; Government leadership; information on external markets and developments; encouragement for first time exporters; and continued support for experienced exporters.'

3.3 Governments should support companies in gaining global mandates

As viewed from the Australian government, other countries are going to have to follow along the same lines. Governments are going to be required to assist organizations so that they are able to bring in the much-valued income for their respective countries. According to Global Information Economy (1997), 'As globalisation proceeds the information industries are increasingly rationalising production regionally and globally. In some of the information industries (e.g. semiconductors and computer equipment manufacturing) global rationalisation is already well advanced. In others (e.g. telecommunications services and equipment manufacturing) regulation or trade barriers have maintained multidomestic structures longer, and rationalisation is at an earlier stage.'

3.4 Facilitate the globalization of countries' businesses

According to Global Information Economy (1997), the whole idea behind the Australian business progress is for organizations to acquire new but profitable markets as seen here: 'With the challenge of globalisation in mind Government must help Australian-based information industries businesses to expand into regional and global markets and access the most favourable conditions in target markets offshore.'

3.5 Improvement of international mobility of labour

Governments will see the need to relax or convert their labour rulings on foreign works

conducting business within their countries' borders, as this is one of the ways to encourage globalization and profit making within the context of the countries' borders. According to Global Information Economy (1997), 'one way in which governments can contribute to the globalisation of Australian based business, and to the attraction of international investment, is to facilitate the international mobility of labour.... The information industries are global industries, their operations should not be restricted by rules more appropriate to a past era.'

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4 Case studies

To illustrate the levels and transfer of information, certain southern African organizations have been specifically chosen, as they show that information has both advantages and disadvantages to countries across the South African border. The functionality is indicated along with the impact that the organization has on the business and economies of the recipient countries.

4.1 Information skills transfer between 50 Zimbabwean farmers across the border to Mozambique

Information transfer is evident in the transfer of information skills and implicit knowledge of the 50 farmers who have relocated from Zimbabwe to Mozambique. According to Global Trends 2015 (2002:1), 'the 13 farmers will be settled in the fertile central province of Manica and each will be given 1.000 hectares of land in line with Mozambican law that allows land to be leased for up to 50 years.' This is a good stand by the Mozambican government to introduce new information transfer skills on farming to the area. They have also tended to follow or rather implement new labour laws. According the Global Trends 2015 (2002:1), 'Mozambique, also facing a crippling drought, is set to take advantage of Mugabe's controversial land reforms to attract the experienced farmers viewed as the best in the region.'

The advantages of this information transfer are that the farmers are experienced, and are used to the environment of the region. A stipulation that has been set by the Mozambiquan government is that information skill transfer has to take place between the ex Zimbabwean farmers and an individual from Mozambique. This ensures that the level of farming will be of a higher quality, the country itself will benefit as this will impact on the country's revenue and, most importantly, Mozambique will have more food supplies.

The impact on the ex Zimbabwean farmers will be of a positive nature as well, as Mozambique will offer them a home for the next 50 years with the option to continue. They will be able to use their information and knowledge expertise and make profits.

4.2 Debswana Diamond Company

The transfer of information and knowledge between the South African based company De Beers and Botswana's government has intertwined to form the Debswana Diamond Company. The agreement that was formulated was that of an equal share ownership. Debswana has an International Organization for Standardization rating. This enables Debswana to operate at a world-class level, information is collected and documented and adheres to international standards. According to the Debswana Web site, 'ISO 14001 certification entails a detailed audit by expert third party auditors, and in the case of Deswana Mines these auditors were from the South African Bureau of standards. The auditors went through the mine's environmental management system in detail, thereby satisfying themselves that the EMS is fully implemented and operational.'

The advantage for the Botswana government, according to the De Beers Web site, is that 'Debswana's mining operations have been chiefly responsible for transforming Botswana from an agriculturally based economy in the 1960s to a country that has subsequently consistently displayed one of the highest economic growth rates in the world.' In accordance with the profile of Debswana the economy in Botswana has changed radically. 'Debswana is a key player in the national economy of Botswana, producing in excess of 70% of Botswana's export earnings, 30% of Gross Domestic Product (GDP) and 50% of government revenue.' Information regarding skills transfer has left the employees of Debswana with new information and knowledge. This will continue to take place, as De Beers is an organization that continues to develop and learn. This new information will cross the South African border into Botswana in the future. This will take place via one of the mechanisms of information transfer. An extract from the Debswana Web site refers to a quote made by the president of Botswana, Mr F.G. Mogae, in July 2000: 'Put simply, we need to ensure that the nation has a reasonable level of income even in the worst of times.'

How this benefits De Beers is that they are still gathering ongoing information about the industry and the region. Profit is made by De Beers, which ultimately assists the South African economy.

4.3 MultiChoice Africa

The information transfer levels as discussed in section two of this report can be identified in the way MultiChoice has described their four main business areas. According to the MultiChoice Web site, 'MultiChoice Africa's business involvement encompasses four areas: Joint Ventures; Independent agents; Franchises; and Programming and technology support.' MultiChoice applies the most applicable model to its marketing strategy in the various countries that it conducts business in.

The levels discussed in section two, can be identified as the information transfer relationship with the four areas as identified by MultiChoice:

- Product can be equated with MultiChoice's independent agents as expressed by the Web site, 'MultiChoice has established a network of entrepreneurial agents to sign up subscribers and install DStv...'
- Service can be equated with MultiChoice's franchises. The franchise business has a MultiChoice identity where management, infrastructure, training and marketing support are provided.
- Training can be equated with MultiChoice's programming and technology support. MultiChoice Africa provides programming and technology support to independent Pay Television broadcasters.
- Technology transfer can be equated with MultiChoice's joint ventures. The joint venture model encompasses shareholding and management of business, and joint ventures are formed with local entrepreneurs or state broadcasters.

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5 Africa 2010: What the future holds

Taking into consideration that the South African economy is said to be split into two distinct areas, namely the market economy and the subsistence economy the government's actions to marry the two economies, and thereby to place South Africa on the global environment map, will benefit the South African public in years to come, by progressing the country from that of a third-world environment to that of a first-world potential. President Thabo Mbeki saw this gap and stated that South Africa ought to 'stay abreast in the race to join the

information age or be doomed to Third-World status' (Du Toit 2002:66). South Africa can also play a large role as a mentor to other African countries as they follow in the footsteps of South Africa's progress.

According to Ariyo (1999:2), 'the fact of the matter however is that knowledge is not exclusive to those countries of the advanced economies.' South Africa can assist other countries in Africa, as they can ride on the back of the successful processes that South Africa goes through.

5.1 Political environment

Input from international organizations will assist Africa as seen here according to Global Trends 2015 (2002): 'International organizations will be heavily engaged in Sub-Saharan Africa over the next 15 years, given its growing needs and slow growth relative to other regions. Africa will continue to receive more development assistance per capita than other regions of the world.'

South Africa will continue to pursue a high level of peace on the African continent as predicted by Global Trends 2015 (2002): 'The Economic Community of West African States (ECOWAS) and the SADC will be the primary economic and political instruments through which the continental powers, Nigeria and South Africa, exert their leadership.'

An interesting point that is made here indicates that the information input into an information level as viewed in section two above can impact on information transfer about a country. According to the assistant director for the Department of Statistics of Swaziland's Ministry of Finance, in AllAfrica.com, 'better and more efficient information technology will make governance more transparent by allowing for the dissemination of information widely. There will be fewer opportunities for corruption if public information is available to the public on the Internet.'

5.2 Social and economic environments

Organizations within the borders of South Africa will pay attention to the information economy and the transfer and exchange of information if it is going to influence their profit margins in years to come. According to the Summaries of ADF'99... (1999:9), 'A caveat: Africa's participation in an information economy may not happen without a strong local vision and vibrant ICT institutions. The private sector will not necessarily invest in problems of considerable importance to society in the Information Economy. Markets do not respond to need but demand (i.e. need + money to pay).'

A South African based organization is utilizing information transfer and exchange in a social responsibility way. According to MultiChoice Africa, 'in Uganda, MultiChoice works with the Discovery Channel to beam education programmes into schools. In Malawi, school sport benefits, and in Mozambique, children enjoy school textbooks through the MultiChoice CSI programme.'

5.3 Technical environment

South Africa is viewed as the leader in technology and according to Global Trends 2015 (2000), 'in Sub-Saharan Africa, South Africa is best positioned to make relatively rapid progress in IT.' This includes satellite systems. Over the next 15 years, a wide range of developments will lead to many new IT-enabled devices and services. Rapid diffusion is likely because equipment costs will decrease at the same time that demand is increasing. Local-to-global Internet access holds the prospect of universal wireless connectivity via

hand-held devices and large numbers of low-cost, low-altitude satellites. Satellite systems and services will develop in ways that increase performance and reduce costs.'

5.4 Long-term trends

In the African environment South Africa is at the forefront of progress however there are warning 'red cards' that the organizations require to take heed of, namely as discussed below (Global Trends 2015, 2000). 'Projections for Sub-Saharan Africa are even more dire than in GT 2010 because of the spread of AIDS and the continuing prospects for humanitarian crises, political instability, and military conflicts. The interplay of demographics and disease – as well as poor governance – will be the major determinants of Africa's increasing international marginalization in 2015. Most African states will miss out on the economic growth engendered elsewhere by globalization and by scientific and technological advances. Only a few countries will do better, while a handful of states will have hardly any relevance to the lives of their citizens. As Sub-Saharan Africa's multiple and interconnected problems are compounded, ethnic and communal tensions will intensify, periodically escalating into open conflict, often spreading across borders and sometimes spawning secessionist states.'

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6 Conclusion

Information is transferable across country borders, but how functional is the exchange process to both countries? This can be functional provided that the organizations can utilize the advantages and disadvantages of information transfer to the best of their ability. As noted above, both countries need to be open to information transfer and how this will impact on the respective economies. According to the Federal Reserve Bank of New York (2002), 'with globalization, it is increasingly difficult for governments to target trade policies effectively.... To remain competitive, individuals, companies, and governments all must adapt to the changing global marketplace.'

It is clear that information is the bargaining point of an organization to make headway within their specific market environments. Ultimately organizations will require a situation where legislation about the laws governing information transfer and exchange between countries will be further relaxed as governments realize that there is profit to be made within the global environment.

The concept of information transfer can be divided into two main areas namely, mechanisms and the levels. When placed within an organization, these can make the information transfer across country borders viable and productive for both the organization and the country that it is based in.

South Africa has a lot to offer the African continent; organizations in South Africa have a vast pool of information that, with the correct handling, will benefit other African countries. As seen above, the case studies show how South African based organizations have made a significant impact on the African continent, and this is only the start.

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ISSN 1560-683X

Published by [InterWord Communications](#) for the Centre for Research in Web-based Applications,
Rand Afrikaans University