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Findings from Case Study 2—the National Company (NC)

7.1 Background and Overview

NC is a group company with a listing on the Egyptian stock exchange. It is an Egyptian group that is known for its wide range of high-quality fresh and frozen products in local Egyptian and export markets. The company was founded in 1985 and has grown annually since then to its present position of strength in both traded and manufactured products. The group employs over 1500 people and has trained staff to offer the best possible service to customers and business partners. The group is active in the production and marketing of a range of products that include ghee, butter, cheese, milk and juice.

The group comprises:

- NC for international investment established in 1985, which provides frozen butter, fish, chicken and liver
- NC for food industries established in 1999, which provides natural nectars, UHT milk, ghee and butter
- NC for food products established in 2004, which provides cheddar and processed cheese.

Table 7.1 NC interviewees and other sources of evidence

The positions of the interviewees
Financial manger
Internal auditor
Accountant
SAP manager
Two members of the SAP vendor team
External auditor (local external auditor)
The head of IIA in Egypt
Focus group with the IT team (four members)
SAP implementation consultant
Sample of documents: Egyptian corporate governance code, Corporate Law (159), Capital Market Authority Law (95), SAP ERP application guides and internal reports.
Sample of observations: relationship between the IAF and other departments, arrangement of the internal audit department, availability of internal audit job descriptions and manuals.

NC introduced SAP as its ERP system in 2010. The company implemented financial accounting, sales and distribution and human resources modules. Nine interviews with the stakeholders and one focus group were conducted, and all related documents and observations were analysed as summarised in Table 7.1. In the following subsections, the findings related to each construct of the conceptual framework will be presented and discussed.

7.2   IAF-Related Governance External Pressures

The IAF provides significant value in all areas of governance; therefore, it is required to maintain its independence and objectivity. At NC, the IAF has no interaction with the audit committee and it is not independent as it is subordinate to the financial department.

7.2.1 IAF-Related Coercive Pressures

As discussed in detail in case one, there are no rules, laws or regulations in Egypt to determine what the IAF should do or even require having an IAF at all. The only compulsory governance rules and regulations are

issued by the Capital Market Authority asking listed companies in the stock market to have an audit committee without mentioning anything directly about the IAF. Otherwise, there is no law for organisations to compel them to have an audit committee or an IAF. Moreover, there was no internal policy or code of conduct at NC to ask the management to keep an IAF. As it was observed, there was no clear job description or internal audit manual within NC. The IAF at NC had very loose rules; therefore, internal auditors follow invisible and customary norms.

As a way of enforcing NC to have an adapted IAF, the external auditor issued a management letter clarifying the importance of having an adapted IAF especially after the organisational change occurred in NC with the ERP system implementation. The management letter concerned with the managerial issues such as points related to internal controls and insufficiencies in internal auditing, which cannot be raised in the audit report. However, no action was taken in response to this letter which was issued recently. This was evidenced in the management letter and interviewees such as the external auditor, who stated that:

> The external auditor put pressures on the management to have and maintain a well-developed IAF in order to add value through assuring the internal control effectiveness. The external auditor mentioned the need for improving the IAF when changing the business process or when there are a lot of new control issues such as what happened after the ERP system implementation. (External auditor)

As a listed company, NC is required by law to have an audit committee that should revise and support the efficiency of the IAF. Conformity with rules and laws occurs seeking legitimacy; however, this conformity could be by appearance rather than essence. Therefore, NC had an audit committee that was not activated at all and consequently there is no IAF support within NC. Therefore, it is recommended to have compulsory laws and regulations to enforce companies to maintain a good IAF.

7.2.2 IAF-Related Normative Pressures

These pressures depend on values and norms as the basis of social obligation. Values and norms in Egypt support the traditional view of

the IAF, where internal auditors are the watchdog. There is no strong Egyptian professional institution to prescribe an internal auditing framework. The IAF at NC was not appreciated as a profession; therefore, internal auditors collectively struggled to define the conditions and methods of their work, set up a cognitive basis and seek legitimacy enhancement. Most forms of internal auditing professionalisation such as formal education or professional networks are weak in Egypt, where new models of modern IAF cannot easily emerge. The common theme in Egypt about the IAF is that it is considered as a function and its main role is to find errors. The internal auditors' knowledge about the internal audit standards is very poor. Internal auditors focus mainly on compliance. Evidence for these conditions was found in the interviews.

> There is a problem in the education systems that educate only whatever have been used in the past and give no attention for the market needs. The IAF results are intangible and indirect and hard to be measured; therefore the NC management put the IAF in low rank while it is should have better attention as it is important function. The IAF is very hard to be improved in a society don't follow the scientific approach in education or management. Therefore, a continuous education system for internal audit profession should be made compulsory. (SAP implementation consultant)

7.2.3   IAF-Related Mimetic Pressure

The absence of cultural-cognitive pressures of governance regarding the IAF resulted in shared misconceptions that constitute the social reality about the weak role of the IAF. This reality about the traditional IAF practice was constructed through interaction of internal auditors to create interpretations of what was going on in other companies. Therefore, mimetic pressures explain the common theme that the internal audit is not an important function. This explains how IAF structures and practice are shaped not only by technical aspects, but also by cultural rules promoted within the external environment.

> The working environment in national companies such as NC is character-
> ised by uncertainty. There are not clear written objectives, working manu-
> als, plans, strategies for improvement, job description, transparency or
> reward and punishment rules. Nobody knows how his work may affect
> the overall company goals. It is a chaos working environment. Moreover,
> they do not give the IAF the proper weight or support. They maintain
> the traditional view of the IAF as inspection function. Therefore, the IAF
> effectiveness depends to large extend on the individuals' qualifications
> and awareness of the importance and the developments of this function.
> (The head of the IIA chapter)

Therefore, the IAF moved over a period of time to be more like what it
was in other organisations through imitation. The wider belief systems
about the accepted traditional auditing are adopted by IAFs to deal with
uncertainty or ambiguity. NC tended to imitate other models to avoid
being different. Mimicking other acceptable models is perceived as
improving its chances of survival (Khadaroo and Shaikh 2007). Survival
is related to achieving legitimacy based on the cultural support of what
is considered correct. Therefore, at NC there was no a clear role model
for the IAF to follow.

7.3 Control Assumptions of the ERP System

The ERP system could play a significant role as a carrier for change
in taken-for-granted practice and underlying norms across the inter-
nal auditing field. The ERP system through practice inscribed into
them is material carriers of the logic of beliefs, norms and rationalities
about how best to structure different kinds of business activities. ERP-
embedded logic is claimed to be globally valid; however, it may not
automatically transfer the global logic of actions into the practice of the
adopting organisation as was the case at NC.

   One of the main motivations for NC to implement SAP systems was
to enhance the weak internal control system, to mitigate the financial
risks of manipulation and theft and to improve cost control. For organi-
sations that had chaotic processes such as NC, when implementing the

ERP system, the business process has to become organised with better controls. The ERP system offers a strong accountability system and reduces human intervention. If the ERP system was applied properly, most of the illegal and unacceptable practice should have been stopped, as supported by interviews.

> We had practice in our company such as raising the accounting profits to get a loan from banks and reducing the accounting profit for taxing purposes. If we applied SAP properly, most of this illegal and unacceptable practice should be stopped. Most of this practice is preferable by the management. (Financial manager)

In this section, the ERP system is explored focusing on the process of translating the assumptions behind the ERP-embedded principle of control in the NC context. Therefore, data codes identify the meanings and expectations that different groups were expressing about the assumptions behind control logic of the ERP system as following.

7.3.1 Automation

The ERP system turned the business processes into being automated processes; therefore, the ERP system reduced human intervention and errors. The automatic reflection of the material and products movement on the accounting records reduced the errors in the financial records to a minimum. The ERP system controlled the processes based on using a single data entry point, and all subsequential data processing is done automatically. Most of the participants stress this point:

> Errors in the financial system could be zero as the non-financial action automatically creates the financial entry that translates the financial impact of this transaction into the financial records without human intervention. SAP automates all HR and payroll calculation as the working hours are calculated automatically based on the finger print for each employee. Therefore, one of the most important assumptions of control in the ERP system is that they depend on controlling one single point of entry. Data are entered once to the system and no one enter these data

again. Once the data entered the system it will affect all related modules automatically. (IT team member)

One of the motivations to implement the ERP system, at NC, was to have an automatic archiving system for transactions, assets and HR records instead of a manual and paper-based system. The ERP system absorbed all related rules and automatically enforced their application and automatically applied the segregation of duties. Automation affected the IAF practice since the system does most of the traditional checks which used to be done by auditors.

7.3.2 Centralisation

The ERP system gathers a transactions' information from many areas. The financial module centralises all financial data that is not shared with any other module. By having a centralised data source, transparency and visibility were increased for all branches and the accuracy of the financial information was increased. Therefore, data centralisation could have a direct impact on auditing practice since it collects all the needed information for auditing purposes in only one source. Evidence was found for this through interviews; for example, the SAP vendor stated that:

The ERP system saves all data into one central database and makes the data available for all needs. The financial module is a pool that is affected by all transactions take place in all other modules. This centralisation has a great impact on the data accuracy and considered as a great support for monitoring. (SAP vendor)

7.3.3 Continuous Timely Monitoring

The ERP system offered tools to do continuous monitoring of employees' activities and data processing on systems. By the systematic tracking of transactions' details in real time individuals could be continuously monitored. Real-time information disrupted norms of control by action. The ERP system offered easy access to information mostly

developed in real time through the integration across the organisation. Therefore, at NC, the ERP system has made many of the internal auditing practice redundant through their continuous monitoring functionalities. Actually, the ERP system increased the inter-dependability of work processes and increased the importance of peer reviewing.

> We have a new assumption for control which is the continuous peer review process. It is a must that no single process moves forward through the system unless each employee reviews the previous work, which is already approved by others and accepted according the criteria, embedded in the systems. Therefore, there are fewer roles to be played by the internal auditors. (IT team member)

The visibility of performance can be greatly enhanced if data are analysed in real time, in finer granularity and in multiple dimensions. Although the ERP system can offer reports in real time, auditors at NC did not use such real-time information, systems' notifications or options for continuous monitoring. The participants confirmed the importance of the options offered by the ERP system; however, they highlighted that auditors did not utilise them.

> The ERP system offers flexible reports that can give the internal auditors full view of the whole business process. It offers the internal auditors easy access for different views and angels for the same business process in the real-time. The internal auditors should use the systems to get whatever reports they dream of, these are integrated and on real-time. Internal auditors always ask for these kinds of reports after about one year of use; therefore nobody at NC asked for these reports. (SAP vendor)

Most of the participants suggested that utilising real-time reporting functionality and portals can empower auditors. While traditional internal auditing was often based on a detection after-the-fact mechanism, the ERP system can help in moving forward through more preventive and continuous monitoring of fraud and misconduct. The ERP system can offer new modes of evidence gathering and the infrastructure for applying continuous auditing.

7.3.4 Data Consistency

The integration brought by the ERP system offered large amounts of consistent operating data from traditionally separated operating environments. This was in contrast to data redundancy that NC had through having scattered data in numerous systems and documents. Via integration of processes, the consistency of data with activities has increased. The data warehouse in the ERP system supported the monitoring capabilities as data describing the same event became consistent. Accounting information became based on event-driven business data. The ERP system reflected the reality of the business process in details from start to end in a consistent accounting format. The participants emphasised the controlling benefits from the assured consistent financial and operational data for auditing purposes; however, the IAF did not adapt to utilise this.

> SAP systems offer very consistence data reports of production, sales, procurements and financials and compared reports with data of previous years… By default, ERP system offer consistence information that should be exploited in recommending the business process improvements opportunities. These features should be used by a good IAF, but who cares. Internal auditors get a full picture of the puzzle that every employee has entered very small piece of it with the ability to know who bring in each piece, when and why. (SAP implementation consultant)

7.3.5 Data Security

Data security in the ERP system is a mechanism that incorporates security features (confidentiality, authentication, integrity and non-repudiation) when accessing, exchanging and interacting with data sets. At NC, data quality and data security were very poor and there were few mechanisms to address these issues. The ERP system helped reduce data redundancy, standardise interfaces, enable global access and improve data security. A piece of evidence found in the interviews was as follows:

> …The data once entered to the system can't be modified and it is securely preserved. During the ERP system implementation, it was critical to implement controls that assure data security. The ERP system focuses on data security through gateways that focus on managing and analysing a user profile from the sign up, data modification and end phases. Auditors should consider the overall set of security functions… (IT team member)

Auditors' main concern has to be the security of financial data because when data security processes are missing, integrity is threatened. Security in ERP requires a new way of thinking about security, not just about the network traffic, but about business transactions that inflict financial losses from systems-based fraud, abuse and errors. This emphasises that it is essential for internal auditors to consider data security issues while assuring the control system; however, this was not the situation at NC.

7.3.6 Control Through Integration

With the ERP system implementation at NC, many functions that were carried out independently were made inter-dependent through increased integration. The ERP system promoted information integration across the organisation without inconsistencies. This was supported by in the interviews by the ERP manager who stated:

> We hadn't any software to manage accounts payable, receivable, inventory, purchasing and assets, etc. This was the motivation to have one system to manage the whole business process… SAP systems integrate HR, accounting, production, costing, sales & distribution and CRM, etc. Our group is divided into three companies. The ERP system integrated the data of all three groups in only one database. (SAP manager)

Integration enhanced the internal control through the dependability of the business process that requires peer reviewing. Therefore, any error was discovered by the next user in the process. Integration supported the accountability system within NC and raised the information accuracy and consistency. Integration consolidated the results of

NC companies and therefore helped in the control of multi-company transactions. Participants confirm the importance of this integration for internal control and audit.

> …Once the data entered the system it affects all related integrated modules on real-time……The ERP system integrally runs all the financial cycle based on the movement of material and goods.… Accounting entries automatically produced based on the real business process. There is no one enter a full accounting entry. (SAP vendor)

Through integration, a single database, non-redundant and better information quality, the ERP system facilitated the tracking of accounting information and created a comprehensive set of updated and consistent data to be used for audit purposes.

7.3.7 Multiple Methods of Control

The ERP system integration resulted in multiple controls over the same data by different parties throughout the business process. A key feature of the ERP system was the use of built-in multiple controls, where controls were employed simultaneously. The ERP system runs all the financial cycle based on the movement of material and goods however separate the physical transactions are from their financial impacts. All users have to review others' previous work in the same cycle. With the ERP system, control became the responsibility of everyone. However, NC did not use all the control possibilities offered by the ERP system.

> SAP systems close the cycle by bringing all the data of inventory, production, sales and accounting adjustments all together in an integrated and consistent way to assure that many controls are active. All users turned to be auditors for others in the same process cycle on the systems. The ERP system reduces errors as each transaction is done by many employees. One enters the data, one approves and one validate. Therefore, each data entry can be reviewed once, twice and sometimes three times. (SAP manager)

7.3.8 Preventive Controls

The ERP system automated and integrated most business processes, resulting in many of the controls becoming automated as well. Automatic controls are preventive more than detective controls. Examples of preventive controls included authorisation lists, segregation of duties and automatic strict application of prior supervisory approval. This assumption was confirmed from the technical participants; for example, the SAP vendor stated that:

> The ERP system is very powerful governance tools that apply tight access control and authorisation processes that assure that no action will take place unless all prerequisites are met. (SAP vendor)

> SAP systems prevent posting an invoice amount to a costumer other than coded into the invoice therefore such error possibility is zero. Furthermore, SAP systems prevent posting to previous period or making a purchase order to a supplier who delivers faulty items or material before. SAP very strong in turning the internal control system to be preventive not only on financial process but also in operational. For example, the systems never allow a production order to go through the system to the production line unless there are all needed materials to produce the whole order available in stock. Therefore, the production line never stops because of shortage in materials. Moreover, the schedule of the machines maintenance is run automatically on the system to prevent any delay. I mean that the SAP prevents many operational risks. (IT team member)

The ERP system through tight and well-defined access controls and authorisations automatically preserved the segregation of duties rules. ERP systems did not improve the internal control systems at NC so as to be preventive as internal auditors did not use the control features of these systems. However, the ERP system implementation initiated the need for determining the responsibilities for each user as the work environment was chaotic beforehand. Evidence was found for this need to determine responsibilities through internal documents of job descriptions and supported by interviews; for example, the financial manager stated:

To be honest we did not have in our company one manual that gathers all policies and procedures in one booklet or job descriptions. With the ERP system implementation we started having documented process that determines all procedures and duties for each function. (Financial manager)

Automation has a great impact on the internal control systems through preventing many kinds of mistakes. However, the ERP system didn't improve controls at NC to be preventive as they do not use or understand the full controlling features of SAP systems…This could be because the absence of the role of internal auditors. (SAP implementation consultant)

7.3.9 Standardisation

The ERP system standardised the IT infrastructures across functions, which facilitated information sharing and business activities integration. The ERP system allowed standardising some of the activities within various locations at NC. Thus, the IAF could improve its monitoring, inspecting and its ability to govern business activities. NC did not standardise the majority of the business processes as there were some preferable processes that could not be standardised through the system since some of them are illegal. This problem was illustrated by participants, such as the ERP manger, who mentioned:

If the ERP system is implemented and used in the proper way it should eliminate many illegal and unacceptable practice as it apply the best practice; however NC asked not to activate many processes on the systems as they want to do it around the system. (SAP manager)

7.3.10 Transparency and Visibility

The ERP system created procedural sequence with wider visible structure of data and operational relations. The ERP system had a profound impact on operational information flow and data transparency. The greater visibility of information was provided by the shared database of the ERP system that centralised the master data and resulted in

data interdependency. Therefore, the ERP system enhanced visibility to management and to peers through workflow dependency and data interdependency. The ERP system implied some changes in the form of accountability that used to be practised at NC by making what used to be invisible, traceable and visible. That this change took place was supported by the SAP vendor:

> The centralised data source increases the transparency and the visibility for all branches. Once data is entered anywhere in the company, it can be easily viewed on real-time. (SAP vendor)

The ERP system enabled visibility of workplace behaviour as workers are visible to their peers. Accounting numbers in reports reflect operational performance and make it visible and controllable. The assumption that greater integration and visibility afforded by the ERP would enhance transparency was problematical at NC. While regulations require transparency in the operational processes and the data that make up financial statements, NC was not yet ready for the transparency offered by these systems. The top management wanted to preserve the information confidentiality even from the accountants. They did not want their suppliers, purchasing prices, customers and profits to be known. Therefore, the visibility was supported at the peer review level but prohibited on higher levels. As supported by many, the consultant stated:

> Misalignments were not because of the ERP system is not suitable but because of many diseases we have in the Egyptian business environment. Tax evasion is one of the diseases. Moreover, the top management wanted to preserve the information confidentiality even from the organisational actors. This means that they are anti-transparency of information. There wasn't any encouragement to increase the transparency, while the ERP system basically increases the transparency. As a result, when NC manufacturing company was implementing ERP modules, managers refused to reveal the components and ingredients of the products to be on the system claiming that it will be very risky to save this information on the systems. The ERP system enforces more transparency and standardisation,

while NC was not ready for this practice. (SAP implementation consultant)

7.4 Aligning Efforts Among ERP, Governance and the IAF

The ERP system is vital in achieving sound governance that aims to ensure transparency and control of all business activities, proper levels of accountability, clearly identified structure of responsibilities and attention to risks. However, the ERP system collided with management philosophy since the management did not perceive the need for ERP to be very great. The practice at NC is not in alignment with the proper governance as the top management does not want the transparency and standardisation offered by the ERP system. Therefore, NC failed to benefit from all the governance enhancement aspects brought with ERP implementation. The ERP system could enhance the governance practice and the internal control systems; however, this does not happen unless the top management wants and encourages this through improving the IAF to make the best use of the systems. As supported by many, the consultant stated:

> NC implemented the ERP system to benefit from the governmental rewards according to Industrial Modernisation Programme. This is a big programme that funds 80% of the cost of implementing the ERP system. As there is free fund there is abuse. Companies ask for fund even they don't need the systems and are not ready to have the system. NC has got this fund to implement the ERP system… NC needed huge efforts to implement the ERP system as it was not ready in managerial terms. NC faced huge gap between the way of practicing and the way supposed to be implemented according to the ERP system. The ERP system enforces more transparency and standardisation, while the company was not ready for this practice. The implementation of the ERP system at NC had many problems; therefore after going live there were some errors, interruptions and delay for the business process. (SAP implementation consultant)

7.4.1 Change Management

The ERP system implementation involved shifting from a rule-breaking, flexible and individualist culture to a standardised and integrated way of doing business. However, the required changes were not made clear at NC, nor were the rationale of these changes communicated. Change is more acceptable when individuals view it as being for the better. A source of great difficulty was mismanagement of the scale of change required in implementing the ERP system joined with mangers' low level of awareness.

The internal control environment after ERP system implementation changed; however, internal auditing had not been informed about these changes. Changes in the organisational structure brought with the ERP system implementation reduced the importance of the IAF as there was no change management plan. This theme was common in the interviews; for example, the IT team stated:

> Most employees feared that the system will substitute them and will do their functions and this exactly what happened in the internal audit department. However, we tried to mitigate this risk by telling employees that the system is coming to facilitate their jobs and it will not work without them, these were individual efforts as we didn't have a proper management plan for this kind of change. (IT team member)

> After the ERP system implementation the organisational structure has been changed … The head of each process is fully responsible for internal auditing related to all transactions and functions related to this process and as a financial manager I am responsible for monitoring and follow-up. Therefore, there is no need to have a separate IAF. The IAF has been merged into the organisational structure. (Financial manager)

7.4.2 Reengineering and Customisation

There may be some misalignment between the functionality offered by the systems and that required by the implementing organisation. As a result, NC had to choose among adapting to the new functionality, living with the shortfalls, arranging workarounds the system or

customising the systems. The ERP system offered a stricter internal control environment than the relaxed one at NC. Therefore, NC arranged some ways to work around the ERP in order to keep the preferred practice. These workarounds provided the needed functionality without modifying the systems through manual solutions and finding alternative ways to perform functions outside the systems.

In some areas, such as cost control, there was a motivation to adopt best practice, but in others, such as taxation, there was a motivation to work around the ERP system to keep the old practice. These practices were mentioned in the interviews by many; for example, the ERP manager stated:

> We faced many problems and challenges. For example, the practice in the payroll module was different from the rules and regulations in Egypt; therefore we had to make many configurations in this module. We have something called casual employee, who is recruited, started work and paid for without any formal contract. We manage this situation through working around the system by making a special pay code for those employees to pay them until their situation is settled. (SAP manager)

7.4.3 Internal Auditors' Involvement in ERP Implementation

At NC, internal auditors had no role at all to play at any stage of the ERP system implementation. Since there was no appreciation of the importance of this function, it has not been involved in the implementation. Moreover, the management had a perception that IT auditors only can be involved in the implementation; therefore, no internal auditor joined the implementation team as NC had no IT auditors.

While the internal auditors had no role at all in the ERP system implementation at NC, almost all the interviews emphasise the importance of involving internal auditors in the implementation, but only if they were qualified. The involvement of internal auditors could enhance the ERP system impact on improving the governance process within NC. The internal auditors could assure the authorities given to each employee, assure the implementation of segregation of duties rules and

provide advice about appropriate internal controls. Moreover, internal auditors' involvement could have a significant impact on their understanding of the systems details and give them useful experience about the business processes through the system. For example, the IT team member stated:

> There wasn't any role played by the IAF during any stage of the implementation process.…The internal auditors in NC had no impact at all on the ERP system. Internal auditors in NC hadn't any IT background; therefore they didn't participate in the ERP system implementation. They didn't have anything to add. The IAF in NC was doing the minimum role of what a proper IAF should do. We hadn't the qualified internal auditors that we could expect value-added from their participation. At the end I would like to add that the ERP system is a very good corporate governance tool; however the internal auditors should be the most involved personnel in utilising these features in the systems to support the governance effort within the company. (IT team member)

7.5   The IAF Adaptation

The ERP system ushered in changes which were cascaded across the entire organisation; therefore, auditors had to adapt as both risks and benefits were propagated in the ERP system implementation. The ERP system could carve a new audit landscape requiring internal auditors to change audit processes, structure, controls and tests when auditing. In order to investigate and explore the response of the IAF to the ERP system implementation in the context of the governance at NC in Egypt, the adaptation of the structure and practice of the IAF were explored after ERP use for 1 year as follows.

7.5.1 Scope of Services and Practice

Before implementing the ERP system at NC, internal auditors emphasised checking and assuring each and every transaction recorded in the financial books irrespective of its materiality and checking various

calculations in the business process and so on. Therefore, internal auditors could not identify and focus on the weak areas of the internal control system of NC. The internal audit scope at NC was determined by the financial management or internal auditors alone based on on-demand audit. When financial management determines the scope, it might exclude problematic areas. When internal auditors determine the scope on their own, the areas selected might be insignificant and the results do not attract attention. Moreover, there was no written authority delegated to auditors. It was assumed that everyone was aware of the extent of the internal auditors' authority. For example, the internal auditor stated that:

> We are working in the private sector so we have to be fixable to please the management. We don't have an approved periodical audit plan. We are getting involved whenever there is a case of deficiencies somewhere in the process. Moreover, the top management believe that having external auditors is enough; therefore the IAF role should be at minimum. The internal auditors do whatever they are asked to do by the management. (Internal auditor)

After the ERP system implementation at NC, internal auditors who traditionally focused on legacy processes realised that controls and processes have shifted from discrete manual interventions to continuous automated monitoring. Integrated processes across business operations made assuring controls onerous, especially when internal auditors were unaware of vulnerabilities which arose during the implementation stage. Moreover, the IAF could not trust and utilise the ERP system unless they are being used correctly. Internal auditors should be confident that all users use it in the right way in order to depend on its outcomes.

After the ERP system implementation at NC, the IAF was reduced from a department to only one internal auditor. This internal auditor has other responsibilities than auditing such as sales targets. There was a belief that the ERP system does most of the internal auditors' duties and that the ERP system reduces to a great extent the need to have internal auditors who verify the correctness of the financial figures or to do compliance auditing with rules. Therefore, the very narrow scope

of the IAF is mostly covered by the ERP system and the value of the traditional IAF quickly disappeared. The ERP system turned the whole financial department into controllers and auditors. There is a peer review process going on. Most of the internal auditing tasks are now done automatically by the systems. There was great emphasis on these changes in the interviews; for example, an IT team member stated:

> The top management kept only one person who is the youngest internal auditor only to show that we still have an IAF; however to be honest he is doing a kind of audit but he has other managerial responsibilities can you imagine!!! (IT team member)

> Some companies have an IAF as a matter of showing. For example, I was surprised when I found in NC that the CIA has other duties he should achieve. This means that there is no understanding at all about what the IAF should be responsible for. These companies keen about having something called IAF but they do not mind what it should do. (The head of the IIA)

NC had an IAF after implementing the ERP system for about one year, but there was no benefit out of this function for reviewing daily operations. The ERP system did more than the internal auditors were previously doing therefore the management though that the external auditing would be enough. The ERP manager stated:

> After the ERP system implementation the internal auditors' role becomes very limited one. The ERP system eroded the internal auditors' role and importance in NC. The business process is going now systematic and almost self-controlled. This means that if we are using the ERP system properly, there will be a minimum need for the IAF. This could be because that we didn't have that strong and effective IAF that do more than transactions review (SAP manager)

> The ERP system does most of the accountants' work within the company and takes us to be reviewers, auditors or controllers to monitor the process going through the systems. (An accountant)

After the ERP system implementation, it was suggested by participants that the internal auditing scope should increase to cover all the new

controls and to utilise the ERP system's controlling features. Internal auditors should be interested in reviewing the access allowed for each employee to the data and the permissions for entering, viewing or editing. Internal auditors should monitor users' activities on the system. These should be the practice of the new IAF; there is no need for technical IT knowledge to carry them out. The ERP system made the IAF easier; therefore, its focus could be shifted to a more strategic role; however, at NC, the IAF disappeared instead of being adapted. Internal auditing efforts should be integrated in the fully integrated working environment. When auditing a single part of the fully integrated business process, this will reduce efforts in auditing all other integrated parts of the process. These suggestions have been raised by most of the participants. For example, IT team member stated:

> We as IT team understand that the IAF should be improved and change to play a modern role on wider scope that means being involved in all functions even IT and IS. …The SAP systems take off huge burden on the internal auditors. Therefore, internal auditors should focus on analysing the data to find improvements opportunities … . The IAF shouldn't be only related to accounting and financial department. (IT team member)

> The ERP system should move their [internal auditors] focus from tiny things to things that matter. The ERP system should be exploited by the internal auditors to increase their scope of focus and to do more analysis to find out improvements opportunities. These systems made the traditional internal auditing very easy and saved most of the time consumed in these regular checks. Internal auditors should decide whether to improve and change their practice to add more value or otherwise the systems offer whatever they traditionally offered. The IAF should be analytical function by the aim of advising and consulting to offer improvement opportunities … The ERP system encourages internal auditors to be involved in new operational areas over all modules such as manufacturing, HR, inventory, purchasing and marketing. The ERP system integrates the whole business process, make all transactions made anywhere in the company reflected in the accounts and help in identifying the deficiencies in the process. Therefore, there should be integration in the auditing missions as well. (Financial manager)

The IAF at NC disappeared; however, most of the participants asserted the need for a developed IAF that could be involved in all processes not only financial audits. The IAF can take advantage of the ERP system implementation to offer recommendations to improve higher importance issues on a higher level than tiny errors and issues.

7.5.2 The Structure of the IAF

At NC, the internal audit team was always looked upon as a representative for the financial department assigned to detect financial frauds. The organisational restructuring after the ERP system implementations was not in favour with the internal auditors.

> The ERP system eliminates the need for traditional auditors who don't know anything except reviewing the documentation process for each transaction. There is a need for more qualified internal auditors, who are willing to accept change and to learn new things. (SAP vendor)

After the ERP system implementation, all internal auditors left NC or were redirected to other jobs except for the youngest auditor. Most of the duties of internal auditors were carried out by the systems, and the others were provided by the IT team. Therefore, it was suggested by participants that experienced IT persons should be utilised. By having a team member with IT knowledge, auditors would be able to increase audit scope. This could be applied to other areas such as operations, accounting, HR, marketing, security and compliance. In order to gain knowledge of all SAP modules, there is a need to have some auditors who have the systems' knowledge related to all modules in addition to the general auditors who have the business process knowledge. To work in the ERP system's integrated working environment, there should be integrated efforts to make the best use of the system. The ERP system offers many control features; however unfortunately, they are not yet used at NC. As was confirmed by most of the participants, the consultant stated that:

> The internal audit team in the SAP systems working environment should contain IT auditors one for each module and one general auditor for the function that the module covers. NC should have certified internal

auditors and certified information systems auditors. The internal audit team should be integrated in order to be able to perform in the integrated environment. The best is to have an internal audit team that include mixed experiences in all business aspects from purchases, production, marketing, sales, finance, HR, IT, inventory, etc. The IAF should monitor all business aspects with a comprehensive eye. I think that there is a plan at NC to recruit some highly qualified young internal auditors from mixed backgrounds. (SAP implementation consultant)

7.5.3 Internal Auditors Skills

Internal auditors at NC had mainly traditional auditing skills for tracing transactions. These skills were no longer needed. Moreover, internal auditors did not receive proper training that would have helped them to improve their capabilities. It was suggested by participants that internal auditors needed to be trained in technical areas of accounting, auditing, internal control and fraud detection in the new working environment of the ERP-integrated IS. In addition to these skills, there was a need for interaction skills in order to be able to interact with other specialists, with the auditees, the IT team and management. Skills such as business and system knowledge and judgement were needed as well. In order to effectively evaluate risks, assess sufficiency of internal controls and identify improvement opportunities, internal auditors should have a good understanding of the business processes. In the ERP system environment where IT drives key business processes, internal auditors should understand the systems. One of the IT team members stated:

All internal auditors we had didn't understand how the SAP system can help them in their mission. Internal auditors we had … should be qualified through first understanding the auditing knowledge. Internal auditors should know the modern and comprehensive role of their function. They should forget the traditional transactions tracing. Internal auditors should have continuous education programme in order to be updated with the new development in the function and the impact of the new technology on their function. Internal auditors should be the most trained group on using the ERP system, knowing what are the tools in the SAP that can be used for auditing purposes, knowing how to assure the controls in the system, knowing how to work in a close relationship with the IT team and

knowing how they can get the reports they need from the system. The internal auditors should be the most interested in the ERP controls and accountability reports produced; however this depends on the organisational culture and the top management understanding of the importance of the IAF role. In NC there isn't the enough appreciation for the IAF; therefore this function couldn't survive in NC after ERP system implementation as it didn't get the proper support to improve. (IT team member)

We need internal auditors, who are able to deal with the system, know how to get the needed information from the system. The SAP systems should be read to learn how is the accounting cycle going through the system, otherwise we can never audit. I believe that to be a good internal auditor, I should be initially a clever accountant. I should know all possible accountants tricks through the systems; therefore I should understand these software details and get full training on these systems. I should get some courses to know how all accountants use the system, how data is entered to the systems and what the outcomes of the system are. Internal auditors should have knowledge more than accountants who are using the systems in order to be able to audit on their outcomes. I have poor SAP and IT and IS auditing knowledge. …I heard from accountants that SAP systems are not easy to be used. I have no idea about the internal controls in the system. (Internal auditor)

ERP implementation exposed some managers such as CIA to becoming unqualified for this position. Auditors needed to learn how and why their processes have changed. These requirements meant that auditors had to change how they thought about their work and how they felt about the new relationships developed within the organisation. Unfortunately, auditors' training in NC was insufficient. The top management should have the willingness to allow adaptation through accepting that a lot of learning has to be done at all levels. This would open up opportunities such as the exchange of ideas with organisations or individuals who have already done successful implementations.

7.5.4 Internal Auditing Tools

The ERP system implementations did not initiate or motivate the use of new audit tools such as electronic work papers, CAATs or query software. The ERP system did not offer functions especially designed

for internal auditing use; however, the ERP system can offer view and query options for internal auditors. The ERP system offers tools which can be used for internal auditing purposes to monitor controls on warehousing, cash management, receivables and payables. The ERP system could make internal auditing easier by offering multi-integrated controls and transparency to trace and the ability for establishing accountability system. The IAF could use the systems to run whatever reports they need; these are integrated and in real time. While the ERP system could be considered as a tool for the IAF to follow up the implementation of governance rules, SAP systems were not being used at all by internal auditors at NC. Evidence was found for this lack of use by internal auditors through the interviews. For example, the internal auditor stated:

> I don't use the SAP system at all even I have heard some of its controlling features. I work lonely in NC as a responsible for everything. I move among headquarter, factories and branches. We will not need new software for auditing as they say that SAP can offer us whatever we need. (Internal auditor)

> Each module offers many types of reports that can be used for auditing purposes. At NC we haven't been asked to make such query responsibilities or to modify any of the reports. (SAP vendor)

7.5.5 The IAF Sourcing

The ERP working environment requires different skills and competencies in the internal audit team. However, at NC where the function is managed internally, the choice of a CIA aims at choosing a harmless person rather than selecting the best. At NC, the traditional IAF was neither outsourced nor adapted. The traditional IAF was eroded; however, there has been a declaration of the need for either an integrated team or to outsource it.

Although NC had no proper IAF, it was suggested by the interviewees that it should have a better IAF that is able to audit in the ERP system environment whether it is internally or outsourced. When outsourcing the IAF to outsiders who have an integrated internal audit

team that contains specialists in all business aspects, then the IAF would be much more effective than having a very poor internal one. This was supported by the ERP system manager who stated:

> The ERP system reduces the importance of having IAF in NC; therefore I see that it will be better to have it outsourced than have it in the company as its role is minimised. Instead of disposing of the IAF totally, we will need it to be outsourced that will be much better. The ERP system needs highly skilled and qualified internal auditors to add value. I suggest that to be outsourced. The external auditors who outsource the IAF have many CAAT that can be used to audit the ERP system from the IT and IS point of view besides the massive data that the ERP system produces. (SAP manager)

7.5.6 Internal Auditors' Relationship with IT Department

After the ERP system implementation , the working relationship between the IT team and the internal auditor became closer. The IT team were always in support of the auditing function, and they always tried to find ways to work around the systems to help internal auditors overcome systems difficulties. Since NC had a very weak IAF, the IT team started supporting management needs through monitoring the activities on the systems, assuring the segregation of duties and assuring the correctness of the financial numbers. The IT team were involved in the ERP system implementation and participated in the segregation of duties rules setting. IT team members at NC have accounting backgrounds and understand the SAP systems; therefore, they did some of the duties that were supposed to be done by internal auditors. The IT team understood the audit logic and started providing some audit services to the top management. This was one of the main factors that led the internal audit team to leave NC. Therefore, the IT team gained importance more than the financial team. Therefore, having IT auditors in the audit team to audit the IT department's activities was recommended. Previously, the financial team was the most important team in NC as they have the right to confidential information. Now, the IT

team is very important too as the CFO and the IT director became on the same level or more of importance within NC. As the information was available at the financial department, it was available in more detail and more clearly to the IT department. It was observed by the researchers that the internal auditor is located within the IT department. Many supported this theme; for example, the IT team member stated that:

> I monitor the financial module performance and reviewing most of accounts on regular basis. I have accounting background and was involved in the SAP implementation and I fully understand the whole financial process through the system from A to Z. I report to the top management about the users activities on the system. We don't have an actual IAF therefore we are managing, monitoring and assuring issues. There should be collaboration among IT team, IT auditors coming from technical background, financial auditors coming from accounting background and general auditors having business process knowledge. IT team can enhance the IT auditors' capabilities but when we have them (IT team member)

7.5.7 The Size of the Internal Audit Team

The IAF has been eroded after the ERP system implementation for many reasons. These reasons include: the IAF maintained a very traditional auditing mindset that did not add value and was easily covered by the ERP system; internal auditors did not participate in the ERP system implementation to know how the ERP system would affect their work; there was no clear change management plan that included IAF adaptation; there was no interest or support from the management for adapting the IAF; the ERP system made the need to have a traditional IAF obsolete and the IT team took over many auditing duties. Therefore, internal auditors could not cope with the new working environment and preferred to move to another company except only one internal auditor who did the physical count and worked in between the financial department and the IT department. Moreover, the ERP system made the traditional internal audit practice, which was the main activity of the IAF, very easy compared to before. Therefore, there was agreement

about reducing the IAF size after the ERP system implementation. NC shrank the internal audit's traditional team as the ERP system offered well-controlled business processes. Most of the internal auditors at NC had the skills to audit on paper and did not know how to use computers. This depletion of the internal audit has been confirmed by many, and the internal auditor stated:

> We had full audit department but unfortunately it isn't exist anymore. The head of the internal audit department left the company and then disruption in the department occurred, therefore most of the auditors left too. The internal audit department is empty these days; therefore it needs to be rebuilt again not change. It should be rebuilt according to the new needs of working in integrated environment. (Internal auditor)

7.5.8 The IAF Budget

At NC after the ERP system implementation, the budget assigned to the IAF has decreased significantly as the team was reduced from nine to only one. Moreover, the ERP system reduced the cost of audit investigations because of improved visibility. The integration offered by the ERP system gives the internal audit the possibility to perform many tasks without moving from the office. By saving the time and effort of the internal auditor, the money spent on the function was reduced. NC saved on the budget assigned before for the IAF. The budget assigned to the IAF reflected the interest of the top management in supporting this function. The top management at NC did not give proper support for this function. While the budget was reduced, participants suggested the need to increase it in order to add more qualified internal auditors with mixed experience and to use the new audit tools. For example, the internal audit stated that:

> SAP systems saved the visiting expenses to the branches as SAP offer transparency of financial information and visibility of non-financial numbers. Therefore, the IAF investigation expenses decreased; however with the need for qualified a mixed team and the need for IT audit tools the budget assigned for the function should increase. More training and better tools are needed. (Internal auditor)

7.5.9 Internal Auditors' Relationship with the External Auditor

The ERP system implementation did not affect the working relationship between internal and external auditors as it was very weak both before and after ERP implementation. External auditors had doubts about the independence, objectivity, expertise, scope of work, size of the audit department and overall effectiveness of the IAF at NC. They felt that the IAF lacked professionalism, which adversely affected its work and the level of cooperation between them. NC had an IAF consisting of only one person who lacked qualifications with a scope of duties which is not clearly defined and did not report to the audit committee. Although ERP systems implementation did not change the working relationship between internal and external auditors, it helped the external auditors in their work. For example, the external auditor stated that:

> In the most of national companies such as NC the IAF is under the supervision of the financial manager. This undoubtedly affects the internal audit independency. The IAF at NC does not add value as it is not independent and internal auditor is involved in daily non-audit related work. ERP system didn't change the relationship with the internal auditors; however it helps external auditors in their work of testing of controls. (External auditor)

7.5.10 The IAF Strategic Response

The ERP system was a proximate trigger of internal auditing change, but change processes were triggered ultimately by NC's management and auditors. Since the context was highly uncertain for internal auditors, they exerted effort to reestablish control through trying to imitate legitimacy features of successful models. However, they could not find any suitable models because of the weak internal auditing professional networks available. The auditors' uncertainty was exacerbated by the limited information provided to them about the organisational changes. The centralisation, automation and integration of data processes brought

with the SAP implementation caused a reduction in the IAF content, reduction of the number of auditors and resulted in a loss of autonomy for the IAF as it became very close to the IT team.

Internal auditors could not use the compromise strategy actively through bargaining tactic. Internal auditors did not participate in the ERP system implementation. However, it has been used through balancing tactic. NC did not discard all internal auditors; however, it kept an internal auditor as a sign of having an IAF. In this respect, most of the interviewees stated that:

> The views of the internal auditors were not considered and therefore their knowledge, experience, requirements were not incorporated. (IT team member) The new system was imposed without considering our views. (Internal auditor) I think if they participated in this stage, this could give them huge experience about the business process through the systems and offer them the opportunity to put forward their requirements and preferences. (SAP implementation consultant)

Internal auditors tried to use a defiance strategy; however, their efforts could not succeed because using defiance strategy involves direct and open challenging or attacking the ERP system implementation as a source of pressures. Through *dismissing tactics,* internal auditors tried to resist the ERP system usage. The interviewees noted that the resistance to the change was more visible in the internal audit department collectively rather than in individual auditors. Furthermore, resistance was higher among older than younger auditors. For example, one of the IT team who was involved in the ERP system implementation comments:

> The youngest internal auditor was very interested in knowing more about the system. He was coming to us asking many questions about the systems and how it will affect the function. Other older internal auditors avoided and ignored the systems and started looking for other jobs in other companies without dealing with the systems. (IT team member)

The resistance to change was mainly demonstrated through absenteeism at the training sessions and at the presentations about the SAP and also

through the refusal to use the systems. For example, one of the IT team members stated that:

> The IAF wasn't that strong function to do effective resistance. The Internal auditors believed that they will be neither able to change the implementation nor improve their function to add value in the new working environment. (IT team member)

> The internal auditors in NC refused to understand how these systems work and how they can use it in their audit. Internal auditors couldn't deal with the systems. (The ERP manger)

Through challenging tactics, there was an unsuccessful attempt at resistance. Internal auditors raised the lack of trust in the system by many users. They doubted that the systems will give the accurate and anticipated results that they were spending nights to get right manually and to assure the accuracy of the results. They refused to learn how to extract the data directly from the systems. They claimed that data should be provided for them on demand and refused to learn how to access it themselves. The internal auditors raised the issue of the increased transparency that the ERP system offers and pointed out that it was not preferred by the management. There was no encouragement to increase the transparency at NC, while the ERP system intrinsically tends to increase transparency. However, the auditors' challenge was ineffective as management eventually went ahead with the implementation of the systems. The last option for internal auditors was to attack the systems. They voiced their unhappiness but since they had a very vague understanding of what these systems could offer all they could do was to say that they would not use these systems and raise general concerns about all of the users' fears of these complex systems.

Internal auditors used an avoidance strategy through tactics of buffering and escaping. The IAF responded through avoiding the pressure to change. At NC, internal audit staff realised the inevitability of change to their current practice and their fears grew steadily. Through a buffering tactic, internal auditors tried to keep their old way of reviewing

manually using paper-based methods because of their lack of trust in the new system. The internal auditor commented that:

> Now I depend on my own auditing experience to find out errors such as data entered to the system twice. I depend on my experiences and I don't fully trust the ERP system. Technological systems' results might be right or wrong, while when I do everything by my hand and eyes I will be confident in the results 100%. Moreover, the data entry people are not that qualified, therefore I expect more errors. (Internal auditor)

Errors in the ERP system, such as data duplication, data loss and errors in codes assigned to the data which happened in the first few months of the system use, reinforced the concerns of the internal auditors. However, the problems were gradually resolved by the IT team and the consultant.

Using an *escape tactic*, when the workload allocation was completed and internal auditors faced new responsibilities, they terminated. Internal auditors avoided pressures by changing their activities, thus escaping from the domain where the pressures were exerted. The auditors opposed the SAP systems and left NC because the integrated systems created redundancies and relocations. The IAF had nine auditors at the time of ERP implementation, some auditors were made redundant, others were moved to other departments, others opted for voluntary resignation, and the only one left was reallocated to do more than auditing. For example, one of the IT team members commented:

> Ninety present simply couldn't cope with the new working environment and the management didn't give them opportunity and decided that there is no need for this function. Most of them find themselves other jobs in other companies. (IT team member)

> The internal auditors we had couldn't cope with the new working environment and the management found that there is no added value from keeping this function. (SAP implementation consultant)

Among the main reasons that pushed the internal auditors to escape and avoid using the systems was the lack of support from the top

management. Internal auditors did not receive the proper training to understand the systems. They did not get involved in the implementation process. There was a common theme in the internal audit department that this department will disappear after the ERP system introduction. The IAF effectiveness was an important variable in internal auditors' responses to the logic of the ERP system. As the IAF was very inefficient before the ERP system implementation and there were very weak pressures on the top management to maintain a sound IAF, the IAF could not adapt to accept, understand and change to utilise the new logic of control the business brought with the ERP system. This occurred by making it appear that NC had an IAF and good procedures in response to new requirements, but, in reality, they dismissed this function. NC maintained the appearances of institutionalised practice and structures as the IAF can be considered as a legitimacy producing.

7.6   IAF Legitimacy After ERP Implementation

While the institutionalisation process of the ERP system continued to gain momentum, the IAF has been challenged and no new practice and structure have gained legitimacy. The ERP system was considered as a potential threat to the IAF's legitimacy. The ERP system's logic of control of the business was visible and articulated, while areas of IAF adaptation, within a context of organisational uncertainty that did not provide adequate direction for the change, were pursued. According to Oliver (1991), acquiescence strategy is invoked when the need for legitimacy is high and there is significant uncertainty. Acquiescence could be a way of gaining control and stability in an unpredictable ERP environment and also a way of maintaining or gaining social legitimacy; however, the IAF at NC could not apply this strategy as there was no need for NC to legitimate itself through having a sound IAF. Another dimension of external legitimisation on the organisational level was to maintain the legitimacy for NC by decoupling the inner core from external environment. This is the way that NC used as there was no actual IAF; however, one internal auditor was kept as a symbol of having an IAF.

Depending on isomorphism might be important for legitimacy; however, one of the reasons for not applying this strategy was the lack of successful and legitimate IAF models in the ERP system environment which could be applied. The IAF was not fully considered as a profession. Normative pressures involved the professionalisation of the internal auditors who aspire to define the conditions and methods of their work so as to legitimate their professional autonomy. Here, expectations of acceptable practice were presumed to exist and the IAF conforms to them to gain legitimacy. However, there was a lack of active IIA by which these expectations could be constructed, enforced and changed. The IAF has undergone significant changes in its beliefs, roles and logics that legitimate its practice; therefore, traditional auditing skills appeared to become partially obsolete in legitimating the profession as was traditionally held. However, internal auditors at NC stuck to the old concept of auditing claiming that this gave them legitimacy; however, they had clearly lost their legitimacy.

According to institutional theory, the professions in particular tend to gain legitimacy by affiliating their efforts with the social values of rationality, efficiency and science (Abbott 1988). As internal auditors at NC considered their role to serve their managerial clients rather than others, this affected what they regarded as legitimate. Recognition of the profit motive in NC made them not preoccupied with issues of the IAF professional legitimacy. According to Oliver, the compromise strategy would be invoked when there existed significant uncertainty, but without a pressing need to maintain or gain legitimacy. Therefore, NC has used this strategy. Oliver did not explicitly consider the possibility of invoking multiple strategies in the face of a highly fragmented environment.

It was suggested that the basic strategy to improve legitimacy should be to obtain appropriate credentials that support the auditors' claim to esoteric knowledge. This would be by initially passing the examination administered by the IIA and by the ISACA. Second, legitimating through develops a professional knowledge base, an integrated team and a repertoire of skills that are specific to serving the organisation in the ERP working environment. According to the modern definition of the IAF by the IIA, the IAF should be legitimate through being able to assure the internal controls and ability to assess risks; however, the IAF at NC failed to preserve this role and therefore it lost its legitimacy.

7.6.1 Ability of the IAF to Provide Control Assurance

The ERP system could not be separated from the business as it is another resource including people and assets which are used to achieve business objectives. Therefore, IT controls were as important as any other controls in the business. At NC, the IAF could not assure the effectiveness of internal controls after most of the internal controls they used to review became automated by the ERP system. However, if the internal auditors assure the implementation of the segregation of duties rules on the systems and assure that all the feed processes are done correctly, then the internal auditors could give partial assurance about the effectiveness of the internal control system. The early involvement of the internal auditors in setting up various controls in the ERP system could generate substantial savings in the subsequent control appraisal. The IAF could engage in proactive auditing and work jointly with other experts to implement change and set up control systems.

7.6.2 The IAF Ability to Support Risk Management

The ERP system brought some technical risks that the internal auditors did not know how to assess, such as the risk of business process continuity when the systems go down. Moreover, there was a risk of centralisation by having all information in one place. If any unauthorised person accessed this information, then the company would be at risk. The IT team were responsible for assessing and managing these risks, and internal auditors had no role to play in this issue. For example, one of the IT team members stated that:

> The ERP system brings IT risks of system being down. Once the systems stop the whole business processes stop. There are mitigation solutions such as mirroring through having two servers one backup. IT team is the responsible for assessing and managing these risks without any participation from the IAF. (IT team member)

However, the ERP system offered new assumptions to improve business control; at the same time, it brought new risks. Internal auditors should

understand how to use the ERP system to assure better internal control and mitigate all risks.

7.6.3 IAF Importance After Implementing ERP

At NC, the top management did not attach importance to the IAF. The infrastructure for conducting internal audits was inadequate as no follow-up actions were taken. Apparently, no stakeholders were interested in knowing the deficiencies in the IAF. The IAF did not preserve its importance in NC; otherwise, it would not be so easy to cancel its existence. Internal auditors did not understand all security aspects in the SAP systems; however, it was very important for them to have this knowledge. If the internal auditors had the systems knowledge, their position and their price in the market might increase.

There was no coercive pressure as the IAF did not have any statutory recognition because there was no specific provision in the Companies Act that gives power to the stakeholders to enquire about the internal audit reports and take any action against the management, if the management fails to ensure proper IAF. The normative concepts regarding the IAF had a negative impact in guiding the IAF adaptation after the ERP system implementation. There was no ethical code and disciplinary mechanism that applies to internal auditors. Therefore, most internal auditors were convinced that their main role is to look for deviation from the policies and to write notes about these issues. This is a serious reputation issue that the IAF must address. Internal auditors must eliminate such negative perceptions to be effective in their activities. Ignoring such perceptions reduced the legitimacy of the IAF in its activities and with stakeholders.

7.7 Case Study 2—Conclusion

Normative values and norms supported the traditional view of the IAF. This had a negative impact on the IAF adaptation after the ERP system introduction and did not work to legitimise it. The absence of cultural-cognitive pressures of governance regarding the IAF resulted in shared

misconceptions that constitute the social reality about the accepted weak role of the IAF. Mimetic behaviour explains the common theme that the internal audit is not an important function. The wider belief systems about the accepted traditional auditing were adopted by IAFs to deal with uncertainty after the ERP system implementation; therefore, at NC there was no clear successful model for the IAF to follow.

NC had chaotic business process, which became organised with better controls from the ERP system implementation. The ERP system has made many of the internal auditing practice redundant. The ERP system increased the inter-dependability of work processes and increased the importance of peer reviewing. With the ERP system, control became the responsibility of everyone.

The ERP system collided with management philosophy, and the practice at NC was not in alignment with proper governance. The top management did not accept the transparency and standardisation offered by the ERP system. The ERP system implementation involved shifting from a rule-breaking, flexible and individualist culture to a standardised and integrated way of doing business. However, the required changes were not made clear at NC, nor were the rationale for these changes communicated. The organisational structure changes brought with the ERP system implementation reduced the importance of the IAF as there was no change management plan. NC arranged some ways to work around in order to keep the preferred practice.

The IAF was reduced from a department to only one internal auditor, who has other responsibilities than auditing such as sales targets. The very narrow scope of the IAF was mostly covered by the ERP system, and the value of the traditional IAF disappeared instead of being adapted. Internal auditors did not receive proper training to improve their capabilities; therefore, all internal auditors left NC or changed to other jobs except the youngest one. The traditional IAF neither outsourced nor adapted but eroded; however, there is a declaration of the need for either an integrated team or to outsource the function. The IT team started providing some audit services, and this was one of the main factors that led the internal audit team being eroded.

Since the context was highly uncertain for internal auditors, they exerted efforts to reestablish control through trying to imitate legitimating behaviour from successful models. However, they could not find
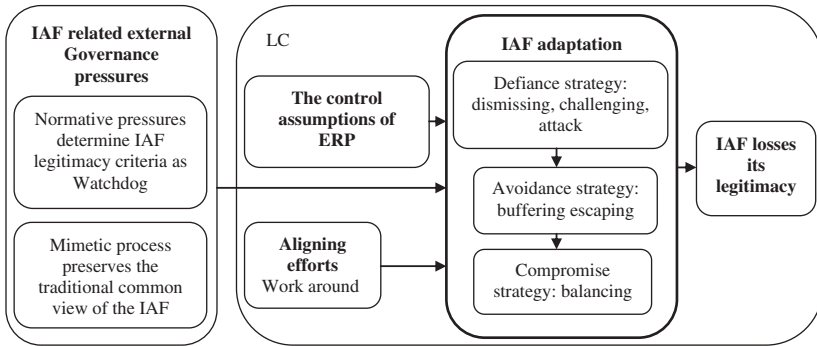
Fig. 7.1   Case study 2—summary of the main findings

any because of the weak internal auditing professional networks avail-
able. A compromise strategy was invoked through balancing tactics
because of uncertainty, but without a pressing need to maintain legiti-
macy. Internal auditors tried to use the defiance strategy through dis-
missing, challenging and attacking tactics; however, their efforts could
not succeed. Internal auditors used the avoidance strategy through tac-
tics of buffering and escaping. IAF at NC could not apply acquiescence
strategy as there was no great need for NC to legitimate itself through
having an adapted IAF. Internal auditors at NC stuck to the old con-
cept of auditing claiming that this gives them legitimacy; however, they
clearly lost their legitimacy. These findings are summarised in Fig. 7.1.

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