“The effect of modern office technology on management performance: Durban Westville”

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ARTICLE INFO	Mashau Pfano and Andrisha Beharry (2016). The effect of modern office technology on management performance: Durban Westville. *Problems and Perspectives in Management*, *14*(2-2), 376-384. doi:10.21511/ppm.14(2-2).2016.13
DOI	http://dx.doi.org/10.21511/ppm.14(2-2).2016.13
RELEASED ON	Monday, 13 June 2016
JOURNAL	"Problems and Perspectives in Management"
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
0	0	0

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The effect of modern office technology on management performance: Durban Westville

Abstract

It is difficult to think of a situation where businesses can do well without the use of modern office technology, in particular, items like computers and telephones. It is extremely difficult to determine if businesses depend on technology or if technology creates business opportunities. Modern office technology is correlated with positive change in management performance. Using a quantitative approach, 67 questionnaires were sent to middle and upper-level business managers in Durban, KwaZulu-Natal. Modern office technology makes significant difference in a workplace. Office technologies enhance performance and this can only be seen if the office is equipped with relevant and needed technologies. There is a strong correlation between the right use of office technologies and positive change in management performance. It is recommended that office managers still procure modern office technology to increase performance. The challenge is to harness this newly emerging technology for the benefit of the business. This study concludes that technological advancement has a positive effect on our quality of life and the way we do business, and this trend is expected to keep escalating.

Keywords: modern office technology, management performance, technology life cycle, technological gadgets.
JEL Classification: M15.

Introduction

For decades, rapid changes have been taking place in all facets of human life, including office technologies, as a result of technological advancement (Davenport, 2013). Margaret and Pac (2009) state that for an office to run smoothly, facts and accurate information are necessary for quick decision-making, and modern office technologies can help managers be focused and in contact with their co-workers. It can, therefore, be said that having advanced office technologies can increase a manager's work performance, because such technologies make work flexible. According to Ndlovu (2009), businesses need to be managed effectively so that they have highly productive employees executing goals aligned with the organization's strategic objectives. Office technologies play a part in helping businesses meet these strategic objectives. Modern technologies need to be managed effectively, because during their use, a business's most important information can easily be lost.

In businesses, an effective way to improve productivity is to raise the level of technology. Management support plays a vital role, managers are the key in ensuring that technology is used to benefit the business. Kao et al. (1996) mentioned that technology is more beneficial when supported by good management systems, and that technology has a limited contribution to productivity. Business managers play a critical role in planning, controlling, coordinating and leading their employees in businesses, to ensure that the right technologies are brought into the organization.

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This study is aimed to show that the availability of office technologies in businesses, and their use by managers increase management productivity. Businesses should procure as many appropriate modern office technologies as necessary in order to ease management tasks and to enable increased management productivity (Palamountain et al. 2012). For businesses, while using technology, the most important thing is to monitor technology life cycles. If this is done, the business will always stay updated about the technologies used and, most importantly, avoid unnecessary costs. Relevant technologies are the ones that, actually, result in increased performance. It is explained that a product or technology has a finite life; it may be used over decades or even centuries, but, eventually, is superseded and replaced.

The study explores the extent of the availability of office technology, its cost, benefits and the risks of use. Over the years, there have been studies on how technologies (in general) improve organizations' performance, but there has been very little research on whether office technologies can improve the performance of managers (Davenport, 2013; Hamel & Prahalad, 1989), which is the main motivation for the study. Technology is important for management productivity, ICT has proven to be a very important factor to make communication smooth and effective.

1. Technology and management productivity

Information and communications technology (ICT) ensures continuous interaction between managers and their subordinates (Davenport, 2013). Technology is the key in improving performance in an organization. Kleis et al. (2012) state that prior research concerning information technology (IT) business value has established a link between business IT investment and

tangible returns such as output productivity. The study further suggests that IT is vital to intermediate processes such as those that produce intangible output. Among these, the use of IT in innovation and knowledge creation processes is, perhaps, the most critical to a firm's long-term success.

A study conducted by Azih (2013) emphasizes the need for building secretaries' capacity in modern office technology. He mentioned that secretaries should be abreast of the importance and use of modern office technology, and recommended the need for training program to be organized periodically for secretaries to update their knowledge on modern office skills, and institutions training secretaries must include in their curriculum these modern office technology skills for program relevance. Azih (2013) also showed that training is important in complementing the use of modern office technology. He mentioned that secretaries and managers perform various office duties in their organization, and their ability to apply some of these modern office technologies leads to efficiency in the performance of their assigned roles. The necessary office technology equipment should be provided in every organization, and training and retraining program should be organized for secretaries in every organization for occupational relevance.

According to Kao, Kuo, Chen and Wang (1996), the productivity frontier shows the maximal attainable productivity at different levels of technology and management (ability of manpower). It should be noted that, in a firm, management has a much stronger impact on productivity than technologies do (Huselid, 1995; Lorenzi and Riley, 2013). A firm can derive a strategy to improve productivity by taking other factors into account, although productivity can be seen as being confined to the technologies of firms.

Ziedonis (2004) mentions that the functions and effectiveness of business managers in today's business organizations depend on the availability of office technologies, and on the skills and competencies of the managers. The ability to use technologies to benefit the organization can help managers to easily complete their tasks, and, most importantly, can increase their performance. Modern business organizations have come to appreciate the roles and importance of business managers, and the need to provide necessary office machines and equipment to facilitate managerial functions (Barber & Bretz, 2000). Margaret and Pac (2009) assert that, based on the reorganization of the office and introduction of automated office equipment, managers' work is produced faster and with a professional touch. The manager is also able to concentrate on more creative tasks with the assistance of modern technologies.

A study states that rapid developments in information technology (IT) have not left any sphere of man's work life untouched (Tony, 2006). Organizations are growing in size and functions and are working across nations, thus, becoming more and more complex to handle. Therefore, technological trends bring about the need for automated business to maintain profession in some business tasks, and such complexity brings with it a need for well-organized managers to control management functions in the organization. More and more organizations are integrating IT into their human resource activities to improve their effectiveness.

1.1. Performance management. According to Abbay (2004), management of performance involves activities that ensure that goals are consistently met. Performance management focuses on enactment of an organization, a department, an employee or even processes to build a product or service, and many other areas (Abbay, 2004). Performance is enhanced by many factors, including rewards, recognition and salaries. Having performance complements, such as modern office technologies, can also improve the productivity of managers, because technologies can make their office work mobile (Turban et al., 2008).

Business owners must use all their efforts to support managers, as with good support systems, performance will be maximized. Galen (1994) notes that performance appraisal will receive much attention in management circles in the coming years, and also asserts that it is a valuable tool for recognizing management strengths and weaknesses, a chance to develop management talents, and an essential part of business planning. It can be used to do SWOT analysis, because at the end of the assessment the appraiser can identify the strengths, weaknesses, opportunities and threats of the business. Business managers have to think 'out of the box' and find the easiest way to perform their functions. Managers can start by considering office technologies as a tool that can enhance their performance. The focus is on whether having office technology helps managers to do their tasks smoothly, compared to no advanced office technology. Advanced office technologies are available, easily accessible, and they improve productivity. Thus, managers must decide on technologies that will help them to increase productivity.

1.2. Technology and business. Tohidi (2011) shares that the idea of on-demand business combines information technology and business to make the companies more rapid, responsible and profitable. He mentions that, today, the most important thing that can be considered for an enterprise is flexibility, which, in this context, means having more adaptability in responding to new demands of the

market and grasping the opportunities. In order to increase its flexibility, first of all, business enterprise takes a look at its interrelated activities and, then, specifies which activity is distinct and axial and which can be outsourced. If the companies can combine and coordinate these activities as they desire, then, they will enjoy remarkable excellence in market (Tohidi, 2011).

According to Tohidi (2011), study of the business processes is used for modelling internal and external operations of the organizations for several decades, and accidentally, such a modelling has rapidly become a standard modelling in businesses, companies and enterprises, booming outsourcing market and making the enterprises and companies grow by such modelling and benefit from remarkable savings. All these have to be imbedded in a company strategy.

A recent study by Dharmadhikari and Basak (2015) states the fact that technology strategy alignment with business strategy of a company plays a vital role in the sustained growth of the business. Dharmadhikari and Basak (2015) mention that, in today's competitive climate, business leaders understand the importance of aligning products, markets and technology with strategic plans. Yet, for most global organizations, achieving that level of alignment has been challenging. Therefore, it is necessary that one builds alignment by gathering cross-functional planning information in real time, and extending product planning from technology users to business users. This can, eventually, result in exponential growth of the company with proper focus on expediting a meticulous implementation strategy (Dharmadhikari and Basak, 2015). It is important to understand how the amalgamation of technology strategy gets with business strategy and chalks the growth path of success of companies. Businesses need to think about how they can build a robust technology roadmap and align the same with their business strategies by evaluating their policies. The technology implementation capability has to be aligned with business strategies. Also, companies need to focus efficiently on choosing the right technologies that will effect path-breaking growth of the company.

Technologies and computing have become an inseparable ingredient (Tony, 2006). Information technology matters to business success because it directly affects the mechanisms through which they create and capture value to earn a profit. Computers have greatly increased human productivity and knowledge. Many businesses use computers as tools to generate and draw ideas, control computerized devices and systems through programming, and model and simulate the design of a complex environment by giving direct commands (Tony, 2006).

Tony (2006) further states that the major drawbacks of using technology are that business owners have adapted successfully to new technology, but technologies, generally, decrease the skills levels of people, which may, eventually, result in an overall reduction in productivity level and profit. People get used to technology doing all the work and tend to neglect their skills development (Tony, 2006). Business managers should make sure that their employees are still able to do crucial tasks without the help of computers.

It is difficult to think of a situation where businesses can do well without technology, especially, computers. Barber (2000) states that it is difficult to say whether businesses depend on technology or whether technology creates business opportunities.

According to Utterback (1994), technology is about application of tools, methods and techniques to improve production and processes. Nothing is as obvious as technology, whether in households or in businesses. Lim, Ahmed and Zairi (1999) state that the intensity and type of technology that businesses use varies, depending on the type of economic activities an enterprise is involved in. Nowadays, all businesses use technology, however, some use technology more intensively than others.

According to Dion (2012), technology alone is rarely the key to unlocking economic value. Businesses create real wealth when they combine technology with new ways of doing business. Therefore, technology is an enabling trend that helps to shape businesses, and the future economic value can, then, be identified (Bughin et al., 2010; Kalakota and Robinson, 2001). This trend of technology falls within three broad areas of business activity: managing relationships, managing resources, and leveraging information in new ways.

The most important thing to do for a business using technology is to monitor the technology life cycle (Utterback, 1994). A product or technology has a finite life, and is, eventually, replaced. It is obvious with some of today's computers and communication technologies that their life cycles are very short and may be measured in months rather than years. For example, smartphones and tablets are improved frequently and, when you are still adapting to a new product, a better product is released for consumption.

1.3. Importance of modern office technology. Modern office technological gadgets such as smartphones, faster Windows operating systems (e.g., Windows 7 and 8), laptops and tablets are being used by many managers and are helpful in terms of making their work very flexible and easy. Hritzuk and Jones (2014) state that we live in an era of tablets, phones

and computers, and IT has become an enabler for greater convenience. Users can access the most popular types of computer software programs, like word processing programs which help with the writing and editing of letters and reports, and data management programs which help us to work with long lists of data and spread sheets every day on our tablets, smartphones and laptops, thus, making some management tasks easier (Hritzuk and Jones, 2014).

Earlier study by Boxall (2000) states that it is important to note that technology is not static, but dynamic. Therefore, it is essential that, while managers are planning to use modern technologies, great care should be taken with regard to their changing nature. Money should not be invested in technology that is likely to become obsolete in a short period of time. It is believed that for a new technology, that is, to be installed in any organization, it has to win the goodwill of everyone, since they will be the ones to use it. The use of modern office technology can lead to enhanced managerial performance, and there are other factors that modify the relationship between technology and good performance. However, if technology is bought and placed in an office, it will not necessarily help the organization to improve this performance. That is why factors that modify the relationship between office technology and managerial performance have to be considered, as they can help to change the relationship so that it is a positive one.

The first thing to take into consideration is that as technology advances, it becomes more complex. For example, a person who grew up using old computers and software will have difficulties using modern technologies. In this case, business managers have to provide training to make a worker familiar with modern technologies. Training benefits the organization because employees and managers will gain skills that can help them to use technology in a way that will result in the best outcome for the organization.

1.3.1. Training. Every organization should be able to measure the benefit of training, by insuring that the cost does not exceed the value. Alan (2010), in his research on the value of technical training, mentions that the value lies within a manager and his team. Collective vision, knowledge and skills sets have a wider impact than any technology. The training and development function is becoming increasingly important to have in business, because managers need to be prepared to use technology to the extent that it benefits their organization. Rees and Porter (2008) mention that training and development has always been an issue that organizations need to take seriously and, if organized effectively, should be viewed as an essential investment and not an avoidable cost. This is because training and development is a way of ensuring that employees perform toward the approved standards and avoid performing toward the required standards.

1.3.2. Managing technology. A second factor is how technology in business is managed. All business tasks should be properly managed in order for the technology to work as intended. Technologies need to be managed, otherwise, users might use them for purposes that do not benefit the organization. Management of technology is needed to show users what they are expected to use technology for, how to use it, and to monitor the effectiveness of technology in relation to business productivity. Lynda (2003) defined managing technology as the integrated planning, design, optimization, operation and control of technological products, processes and services. The use of technology for human advantage, and the process of managing technology in organizations are getting more complex as they become more important. In the early years, the big job was to manage the technology (geting it to work, keeping it running, and, thus, reducing the cost of doing business). However, as technology has advanced, the main thrust was to manage the information resource of the organization, particularly, to support management decision making by delivering information when and where it was needed (Applegate et al., 2003).

Today, the changes required to support new technologies and organizational structures that are now emerging, require a significant amount of well-coordinated business and IT executive leadership (Melville et al., 2004). Managing technology has become a very important element of business.

1.3.3. Mobile technology. The third factor is the mobility of modern technology. It is good to have tools that can help managers to do business at any time, because tools extend working time (managers can do business tasks at their homes, and can reply to and send mails whenever they want to). Mobile technology can be used to increase productivity and profitability. The demand to access business information and applications through mobile technologies such as the smartphone and tablet, and devices running Google Android and Windows 7 Mobile or using RIM Blackberry is surging, as consumer preferences and behaviors spill over into the business workforce.

The reason for this is that there is a huge growth of adoption of these technologies around the world and many business managers are looking for ways to effectively position their firms where they can benefit from this trend. Mobile technologies pose great business opportunities and can be very useful in the following areas:

1.3.3.1. Networking/communication. Mobile technology allows continuous interaction among

employees, managers and customers, because mobile technologies like smartphones and tablets allow people to connect with each other through social media such as LinkedIn, Facebook, Skype and Twitter. This kind of communication is very important in businesses, because it delivers benefits such as efficient use of staff time, improved customer service, and a greater range of products and services delivered.

1.3.3.2. Marketing. Mobile technology has introduced a new dimension to advertising and marketing for businesses worldwide (Haghirian et al., 2005). Businesses use mobile technology to advertize to a greater number of users of mobile technology. Customers now see business advertisements on mobile phones through a variety of mobile marketing technologies, including SMS (text) messaging, mobile websites and mobile applications.

1.3.4. Usefulness of office technology. The fourth factor that influences managers' performance is the usefulness of office technology. The change that office technologies bring to the organization depends on how useful they are. For example, telephones and computers are more useful than a paper shredder and electric sharpener. This means that managers under a tight budget will have to buy a telephone and a computer because they can benefit more from these gadgets.

However, this does not mean that other gadgets with less benefits will not increase the performance of managers; benefits will vary with how useful office technologies become. Billhilf (2006) asserts that, if technologies are useful, they will tend to be used every day.

1.4. Managing time and resources. According to Huns (2005), time and other resources are major constraints in the business. Time and management are the boundaries and directly affect the scope of businesses, and the quality of their products and services. Office technologies help to make things possible, given limited time and resources. Technological gadgets are there to help businesses to save time and resources. For example, smartphones and tablets can help managers to save time because they can be used to send and receive e-mails at any time without having to be in an office at a PC (Schwalbe, 2013).

When a business is extending its market globally, it needs technology to help it to save valuable resources. With today's technology, business managers can communicate with any stakeholder of the business and conclude important deals without travelling across countries to meet stakeholders. According to Matt (2007), today's global business environment calls for complex, widely distributed technologies to drive a highly mobile workforce.

Kerzner (2013) also mentions that managers today have a variety of tools and techniques for dealing with time management and resource issues. These tools must be fully integrated with the overall management system in order to manage the business within the business performance parameters of work quality, timing and resources' utilization.

1.5. Today's high technology business environment. Christensen (2013) shows that the magnitude and speed at which technology has advanced and changed in management practice over past years has been stunning. The management of technology can make a difference; there is no reason to believe that the current rate of change will slow down, and, therefore, the big challenge is to harness this newly emerging technology for the benefit of business. Technological advances have a positive effect on our quality of life, and this trend is expected to keep on increasing.

Dion (2012) stated that new technology advancement is reshaping business industries to industries where every business will need technology to compete successfully. In recent years, we have seen many of these technological changes; some are merely evolutionary, while others are more revolutionary becoming firmly entrenched in the way our organizations will need to deal with the social world.

Empirical studies show that some organizations will struggle with the adoption of the latest trends. However, firms that can successfully assess how to incorporate the latest strategic technology advancements will fare much better than others. Just 15 years ago, a workplace had bulky computers, with only a few connected to the internet; cumbersome wires and oversized fax machines and copiers were common. Today, outdated equipment has been replaced with flat screens, wireless devices and high-tech conferencing systems. Ten years from now, modern devices will give way to more advanced technologies such as multilingual and sensory-recognition software which allows work to be conducted more efficiently. This, potentially, suggests that fewer people will be required to do a job. More employers are embracing technology as a way to hire fewer people. Complexity and challenges faced by today's businesses are quite common in the technology-based environment (Huns, 2009).

1.6. Financing modern technology. New technology-based firms face particular challenges in obtaining early-stage financing to develop and grow their business. Seen from the supplyside, high levels of uncertainty make investors reluctant and create a liability related to the supply of financing to these ventures (Moncada-Paternò-Castello et al., 2014). Today's technology changes rapidly and, if

managers are trying to keep up with these changes, they may spend money buying new technology even if it is not necessary; some changes in technology do not benefit the business organization. Managers have to know when to buy new technologies which can be done by comparing newer technologies with old technologies. The comparison will enable a manager to calculate the benefit against the cost of acquiring a new technology. Managers need to do this because a newly added feature in the new technology might not benefit the organization. Business managers have to avoid spending money trying to finance new technologies that will be useless to the business.

2. Research method

This is a quantitative study, and an appropriate quantitative dataanalysis approach is undertaken. According to Willis (2010), quantitative research is about asking people for their opinions in a structured way so that facts and statistics can be produced to guide the researcher in answering the research question. To get reliable statistical results, it is important to survey people in fairly large numbers and to make sure that they are a representative sample of your target population.

To establish if there is a relationship between using office technology and managers' performance, and to answer several research questions, a questionnaire was used to collect appropriate data. The questionnaire had the following themes:

- Availability of modern office technologies in business organizations.
- Usage of modern office technologies by the managers in business organizations.

Data were collected using a questionnaire, which was distributed to 67 participants who were randomly selected. The participants are business managers, mostly, top managers. The questionnaire had 31 structured close-ended questions. Using this method allows results to be easily interpreted and analyzed using statistical tests like Analysis of Variance (ANOVA), Pearson's correlation, central tendency, T-test, and other tests.

Sekaran (2003) defines a sample as a subset of the population; it comprises some members from the target population. The sample for this research was 67 respondents. The questionnaire was personally administered to 67 business managers in Durban Westville area. Westville Business Park had 69 businesses at the time the study was conducted. The researcher used information from these respondents and will, then, draw conclusions about the entire population.

3. Findings and discussion

Office technologies improve managers' performance if they are effectively managed through improved communication between managers and other employees (Literature). Office technologies make work task easy, reduce costs and, at the same time, reduce the level of errors.

Table 1. Data summary

No. of businesses	Age >35	Managers using technology	Businesses can afford technology	Believe benefits are greater than cost	Believe that technology increases efficiency	Businesses need technology
67	80%	90%	50%	70%	80%	80%

Source: authors own.

3.1. Office technologies improve managers' performance. The study shows that most businesses in Westville, Durban, frequently use technologies, and that managers still buy technologies even though they think that office technology is expensive. Thus, office technology in the workplace is very important, and managers will buy technologies irrespective of expenses. Managers are aware of opportunities and threats that office technologies can bring to their offices and believe that technologies improve performance and make work easy, and, therefore, they try to limit the risks and exploit opportunities. With over 90% of respondents agreeing that modern office technology is important for business, the results show that the relationship between using technologies and managers' performance is positive because many respondents use technology and also believe that it improves performance.

3.2. The literature supports the results, because it states that: if technology is managed effectively, managers will be able to see a positive impact on performance. Managers should always be aware of the costs that technology can bring to the business, and find ways to mitigate risks associated with using office technology. This is done by assessing the risk and benefits of using modern office technology. Managing technological changes and future threats will help managers to only buy new office technologies that have features that can improve their performance, instead of buying office technologies that will slow down their performance because they are too complex and/or useless. If, in the organization, there is effective management of office technologies, business managers will use office technology in a way that benefits the organization.

3.3. What is the extent of availability of modern office technologies in business organizations? 90% of participants use modern office technology, the organizations use technologies to improve their performance (Davenport, 2013), and 93% of respondents think that acquiring office technologies is easy in the modern world. However, more than 50% of participants find technology to be expensive.

From the above, technologies are largely available, and, although expensive, managers still go out and buy modern office technologies. The reason is that, as stated in the literature review, office technologies are needed in the managers' office as they improve day-to-day work tasks and make work mobile (i.e., reduce work constraints).

Office technologies improve all the time; they are getting better, faster and more portable. Modern office technologies are becoming a necessity for every manager to have and that is why they are available in such large quantities.

3.4. What is the extent of usage of modern office technologies by the managers in business organizations? Over 60% of managers always use technology, and over 80% of respondents find office technologies to be helpful. The questionnaire had questions asking if managers are aware of the disadvantages and advantages. A high percentage of managers are aware of the cost and benefit of using office technology. Over 70% of managers agree that the benefits outweigh the cost of using office technology. Over 70% of respondents are aware of advantages offered by office technologies, and 80% of respondents agree that technological changes can be costly. However, they still choose to change to modern technologies.

Thus, managers today use modern office technologies every day and find them to be very helpful. Managers need the help of office technologies to improve their communication standards and to extend their working hours. The literature further states that managers need to start using office technologies every day as most business operations are now done using technologies, and the benefits of using technologies are greater than the cost.

3.5. What is the relationship between technology gadget usage and the performance of managers? Over 80% of respondents agree that office technologies improve managers' performance, and about 90% also agree that office technologies make work easier. When asked if they agree that performance cannot be the same without technology, over 80% agree.

This shows how correlated using technology and management performance are, without referring to Pearson's correlation. However, Pearson's correlation was used, and relationships were tested using the p-value. The results clearly show that there is a strong positive relationship between using office technologies and managers' performance.

Managers can improve performance significantly by using modern technologies and by keeping up with technological changes. According to the literature, as long as changes in technologies come with useful new features, modern office technology will continue to improve performance significantly.

Today, business cannot be well managed without the help of modern office technology. With this in mind, business managers should make sure that they have modern technologies to help them reap the benefits of using technology. The study shows that there is a positive relationship between using modern office technologies and management performance. Therefore, managers who use office technologies are more efficient than managers who do not have office technology. According to respondents, office technologies are easily accessible and affordable.

Conclusion

Modern office technology can make a significant difference in a workplace. It was found that office technologies enhance performance, but only if the office is equipped with relevant and needed technologies. There is a fairly strong correlation between the right use of office technologies and positive change in management performance. The study recommends that business should procure managers to increase productivity, and to stay abreast of modern way of conducting business.

This study affirms that information technology (IT) investment is associated with significant productivity gains.

There is no reason to believe that the current rate of change in technology will slow down. Therefore, the great challenge is to harness this newly emerging technology for the benefit of businesses.

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