

REFERENCES

- Aitken Spence PLC, 2010. *Annual Report 2009-2010*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=343&symbol=SPEN.N0000> [accessed 9th July 2011].
- Barry, JN & Joseph SN 1983, 'Information, competition and Market', *The American Economic Review*, vol. 73, no.2, pp. 278-283
- Bland, JM & Altman, DG 1997, 'Cronbach's Alpha', *BMJ*, vol. 314, no. 7080, p. 572
- Boote, DN and Beile, P 2005, 'Scholars Before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation', *Educational Researcher*, vol. 34, no. 6, pp. 3–15
- Brace, I. 2004, *Questionnaire Design: How to Plan, Structure, and Write survey material for effective market research*, 2nd Edition, Kogan Page, London
- Brynjolfsson, E & Hitt, ML 2000, 'Beyond Computation: Information Technology, Organizational Transformation, and Business Performance', *Journal of Economic Perspectives*, no. 4, pp. 23-48.
- Brynjolfsson, Eric 1993, 'The Productivity Paradox of Information Technology', *Communications of the ACM*, no. 36, pp. 66-77
- Carson Cumberbatch PLC, 2010. *Annual Report 2009/2010*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=336&symbol=CARS.N0000> [accessed 9th July 2011].
- Carter-Steel, A & Tan, W 2005, 'Implementation of IT Infrastructure Library (ITIL) in Australia: Progress and success factors', In *IT Governance International Conference*
- Carter-steel, A, Toleman, M & Tan, W 2006, 'Transforming IT Service Management – The ITIL Impact', In *17th Australasian Conference on Information Systems, Adelaide, 6-8 December 2008*.

Ceylon Theatres PLC, 2010. *Annual Report 2010*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=510&symbol=CTHR.N0000> [accessed 9th July 2011].

Chan, SL 2000, 'Information Technology in Business Processes', *Business Process Management Journal* 6, no.3, pp. 224-237

Chen, W & Hirschheim, R 2004, 'A Paradigmatic and methodological examination of information systems research from 1991 to 2001', *Information Systems Journal*, vol. 14, no. 3, pp. 197-235.

Colombo Fort and Land Building Company PLC, 2010. *Annual Report 2009/10*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=525&symbol=CFLB.N0000> [accessed 9th July 2011].

Coyle, DM, Brittain, K & Malik, B 2010, *white paper on Magic Quadrant for IT Service Desk*, Gartner Inc., [online]. Available at: http://www.itconcepts.ch/fileadmin/user_upload/upload_ch/Gartner_MQ_for_IT_Service_Desk.pdf. [Accessed: 01 November 2011]

Coombs, C R, 1999, 'A Study of the Factors Influencing the Successful Development, Implementation and Operation of Community Information Systems in the NHS', PhD Thesis, University of LoughBorough, LoughBorough.

Cortina, JM 1993, 'What is Coefficient Alpha? An Examination of Theory and Applications', *Journal of Applied Psychology*, vol.78, no.1, pp. 98-104

Dillon, A & Morris, MG 1996, 'User acceptance of new information technology: theories and models 1996', *Annual Review of Information Science and Technology*, vol.14, no. 4, pp. 3-32

Dunamis Capital PLC, 2010. *Annual Report 2009/2010*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=377&symbol=CSEC.N0000> [accessed 9th July 2011].

Eisenberg, MB 2008, 'Information Literacy: Essential Skills for the Information Age', *Journal of Library & Information Technology*, vol. 28, no. 2, pp. 39-47

Finlays Colombo PLC, 2010. *Annual Report 2010*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=251&symbol=JFIN.N000> [accessed 9th July 2011].

Galliers, RD & Land, FF 1987, 'Choosing Appropriate Information Systems Research Methodologies', *Communications of the ACM*, vol. 30, no. 11

Gefen, G & Straub, G 1997, 'Gender Differences in the Perception and Use of E-Mail: An Extension to the Technology Acceptance Model', *MIS Quarterly*, vol. 21, no. 4, pp. 389-400

Glideman, C 2005, *white paper on Thirty-One Best Practices for the Service Desk*, Forrester Research Inc., [online]. Available at: http://www.infochief.com.vn/News/31_Best_Practices_Service_Desk.pdf, [Accessed: 15 October 2011]



Gonzalez, LM, Giachetti, RE & Ramirez, G 2005, 'Knowledge management-centric help desk: specification and performance evaluation', *Decision Support Systems*, vol. 40, no. 2, pp. 289-405

Gupta, BM & Sarkar, M 2006, *white paper on Business Integration Architecture for Next generation OSS (NGOSS)*, Infosys, [online]. Available at: <http://www.infosys.com/industries/communication-services/white-papers/documents/business-integration.pdf> [Accessed: 03 April 2011]

Harcenko, M & Romanovs, A 2010, 'IT Service Desk Implementation Solutions', In *Scientific Journal of Riga Technical University*.

Hemas Holdings PLC, 2010. *Annual Report 2009/2010*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=325&symbol=HHL.N000> [accessed 9th July 2011].

Hayleys PLC, 2010. *Annual Report 2009/10*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=175&symbol=HAYL.N0000> [accessed 9th July 2011].

- Holden, TM & Lynch, P 2004, 'Choosing the Appropriate Methodology: Understanding Research Philosophy', *The Marketing Review*, vol. 4, no. 4, pp. 397-409
- Hewlet-Packard, 2008. *White paper on HP Next Generation Operation Support Systems*. [online]. Available at: <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-0009ENW.pdf>, [Accessed: 18 April 2011]
- Jenkins, MA 1985, '*Research Methods in Information Systems*', North-Holland
- John Keels Holdings PLC, 2010. *Annual Report 2009/10*. [online]. Available at: <http://www.cse.lk/companiesprofile/incomestatement.htm?id=297&symbol=JKH.N0000> [accessed 9th July 2011].
- Kajko-Mattsson, M 2006, 'Evaluation of CM³: Front-End Problem Management within Industry', *Software Maintenance and Reengineering, European Conference*, pp. 367-368.
- Kaplan, B & Duchon, D 1998, 'Combining Qualitative and Quantitative Methods in Information Systems Research: A Case Study', *MIS Quarterly*.  University of Moratuwa, Sri Lanka.  Electronic Theses & Dissertations. www.lib.mrt.ac.lk
- Kaplan, B & Maxwell, JA 2005, *Evaluating the Organizational Impact of Healthcare Information Systems*, Springer New York
- Kotler, P, Amstrong, G & Agnihori, PY 2010, *Principles of Marketing – A South Asian Perspective*, 13th Edition, Prentice Hall.
- Kraus, D, Blood, S & Johnson, G 2009, *white paper on Magic Quadrant for Contact Center Infrastructure, Worldwide*, Gartner RAS Core Research Note. [online]. Available at: http://www.genesyslab.com/system/files/Magic_Quadrant_ContactCenter_Infrastructure_Worldwide_2011.pdf [Accessed: 27 October 2011]
- Lee, AS 1991, 'Integrating Positivist and Interpretive approaches to Organizational Research', *Organization Science*, vol. 2, no. 4, pp. 342-365

- Lorin, MH, Wu, DJ & Zhou, X 2002, 'ERP Investment: Business Impact and Productivity Measures', *Journal of Management Information Systems*, vol. 19, no.1, pp. 71-98.
- Luftman, J 2000, 'Assessing Business-IT Alignment Maturity', *Communications of the Association of Information Systems*, no.4 (14)
- Marcella, R, Middleton, I 1996, 'The role of IT helpdesk in the Strategic management of Information Systems', *OCLC Systems and Services*, vol. 12, no. 4, pp. 4-19.
- McNurlin, BC & Sprague, RH 2009, *Information Systems Management in Practice*, 6th Edition, Pearson Education
- Mawson, P, Carlaw, KI and McLellan, N 2003, 'Productivity measurement: Alternative approaches and estimates', *New Zealand Treasury*.
- Mercir, G 2002, 'Helpdesks in academic environments: Measuring performance and examining the relationship between customer satisfaction and service quality', Bachelor of Commerce, University of Cape Town.
- Myers, MD & Newman, M 2007, 'The Qualitative Interview in IS Research', *Information and Organization*, vol. 17, no. 1, pp. 2-26
- Orlikowski, WJ & Baroudi, JJ 1991, 'Studying Information Technology in Organizations: Research Approaches and Assumptions', *Information Systems Research*, no.2, pp. 1-28
- Parschke, A & Schnappinger-Gerull, E 2006, 'A Categorization Scheme for SLA Metrics', *Multi-conference Information Systems*.
- PinkElephant, 2011, '*PinkVERIFY toolset 3.1 certification letter for CA Service Desk Manager 12.5*', [online]. Available at:
<http://www.ca.com/~media/Files/BestPracticesPrograms/pink-elephant-verify-service-desk-3152011.pdf> [Accessed: 25th October 2011]
- Ponterotto, JG 2005, 'Qualitative Research in Counseling Psychology: A Primer on Research Paradigms and Philosophy of Science', *Journal of Counseling Psychology*, vol. 52, no. 2, pp.126–136

- Porter, ME 2001, 'Strategy and the Internet', In: *Harvard Business Review*.
- Richard Pieris & Company PLC, 2010. *Annual Report 2009/2010*. [online]. Available at:
<http://www.cse.lk/companiesprofile/incomestatement.htm?id=511&symbol=RICH.N000> [accessed 9th July 2011].
- Sabherawal, R, Jeyaraj, A & Chowra, C 2006, 'Information System Success: Individual & Organizational Determinants', *Management Science*.
- Schreyer, P & Pilat, D 2001, 'Measuring Productivity', *OECD Economic Studies*, No.33
- Sheehan M.C. 2007, 'Service on the Front Line: The IT Help Desk in Higher Education', *Educause Center for Applied Research*, vol. 8.
- Skirbekk, V 2003, 'Age and Individual Productivity: A Literature Survey', [online]. Available at: <http://www.demogr.mpg.de/papers/working/wp-2003-028.pdf>, [Accessed: 28th September 2011].
- Sunshine Holdings PLC, 2010. *Annual Report 2009/2010*. [online]. Available at:
<http://www.cse.lk/companiesprofile/incomestatement.htm?id=238&symbol=SUN.N000> [accessed 9th July 2011].
- Tangen, S 2002, 'Understanding the Concept of Productivity', In *Proceedings of the 7th Asia Pacific Industrial Engineering & Management Conference, Taipei*
- Windley, PJ 2001, 'Delivering high availability services using a Multi-Tiered support model'.
- Yahia, IGB, Emmanuel, B & Crespi, N 2006, 'Towards autonomic management for Next Generation Services', *International Conference in Networking and Services*, pp. 38-38

ANNEXURE – 1: QUESTIONNAIRE USED DURING THE PHASE TWO OF THE RESEARCH

Analyzing the Impact of IT Helpdesks on the factors affecting Labor Productivity of Diversified Holdings in Sri Lanka

Dear Participant,

My name is Sampath Subasinghe & currently following the MBA in IT program, conducted by the Computer Department, University of Moratuwa, Sri Lanka. As a requirement of fulfilling my MBA qualification I'm conducting a survey under the topic of "Analyzing the Impact of IT Helpdesks on the Productivity of Diversified Holdings in Sri Lanka. IT end users find the support given by the IT support teams as a critical success factor of their day to work. One of the tools used to make this process efficient is "IT Helpdesk". The objective of this research is to find whether IT Helpdesks have an impact on the productivity of IT end users and IT support teams. Also identifying new features, which makes IT Helpdesks more useful is another objective.

I strongly believe that your inputs to this survey will contribute to the success of my research.

Thank you for your valuable time,

Sampath Subasinghe

MBA in IT, 2010

University of Moratuwa,

Sri Lanka,

August, 2011

Instructions: Please **Highlight** or **Bold** the selected answer

Section#1: Personal Information

1. Name of the Participant:

2. Age of the Participant
 1. Younger than 20 years
 2. Between 20 to 30 years
 3. Between 30 to 40 years
 4. Between 40 to 50 years
 5. Older than 50 years

3. Sex of the participant
 1. Male
 2. Female

4. Are you a member of the IT team of your organization?
 1. Yes
 2. No

5. Does your Primary job function relate to IT
 1. Not at all related
 2. Slightly related
 3. Somewhat related
 4. Very much related
 5. Extremely related

6. How long are you using IT in your carrier?
 1. Less than 5 years
 2. Between 5 to 10 years
 3. Between 10 to 15 years
 4. Between 15 to 20 years
 5. More than 20 years



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Instructions: Please **Highlight** or **Bold** the selected answer

Section#2: Identify the Methods used to Fulfill the IT Support Needs

7. What type of IT department do you have
1. Centralized
 2. Centralized and outsourced
 3. Distributed
 4. Distributed & outsourced
 5. Other (Please specify):
8. What are the current methods of requesting IT Support (Select All)?
1. Request by Telephone
 2. Request by emails
 3. Request by face to face meetings
 4. Request by web based tools
 5. Other (Please specify):

9. If you are using Telephone to request IT support

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
The IT support team is always contactable.	1	2	3	4	5
The issue/ request can always be directed to the most suitable person	1	2	3	4	5
The IT support team will update you time to time about the issue/ request made by you	1	2	3	4	5
You can ensure that a solution to your issue/ request is given within the agreed time limit	1	2	3	4	5
You can always contact the IT support team and obtain information of any issue/ request made by you in the past	1	2	3	4	5

Instructions: Please **Highlight** or **Bold** the selected answer

10. If you are using **emails** to request IT support

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
The IT support team is always contactable.	1	2	3	4	5
The issue/ request can always be directed to the most suitable person	1	2	3	4	5
The IT support team will update you time to time about the issue/ request made by you	1	2	3	4	5
You can ensure that a solution to your issue/ request is given within the agreed time limit	1	2	3	4	5
You can always contact the IT support team and obtain information of any issue/ request made by you in the past	1	2	3	4	5

11. If you **personally** meet the IT support team to request IT support

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
The IT support team is always contactable.	1	2	3	4	5
The issue/ request can always be directed to the most suitable person	1	2	3	4	5
The IT support team will update you time to time about the issue/ request made by you	1	2	3	4	5
You can ensure that a solution to your issue/ request is given within the agreed time limit	1	2	3	4	5
You can always contact the IT support team and obtain information of any issue/ request made by you in the past	1	2	3	4	5

Instructions: Please **Highlight** or **Bold** the selected answer

12. If you are using a **web based tool** to request IT support

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
The IT support team is always contactable.	1	2	3	4	5
The issue/ request can always be directed to the most suitable person	1	2	3	4	5
The IT support team will update you time to time about the issue/ request made by you	1	2	3	4	5
You can ensure that a solution to your issue/ request is given within the agreed time limit	1	2	3	4	5
You can always contact the IT support team and obtain information of any issue/ request made by you in the past	1	2	3	4	5

Section#3: Identifying the Role of IT Helpdesks in Fulfilling IT Support Needs



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13. Call Logging process of an IT Helpdesk

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
Will provide you a single point of contact for IT support issues/ requests	1	2	3	4	5
Will ensure your issue/ request will always reach the IT support team	1	2	3	4	5
Will allow you to plan your work, by providing the current status of the issue/ request made by you	1	2	3	4	5
(if you provide IT Support) Will allow you to provide accurate solution, by providing the history of the issue/ request made by your customer/ fellow employee	1	2	3	4	5

Instructions: Please **Highlight** or **Bold** the selected answer

14. Call Routing process of an IT Helpdesk will ensure that

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
your support request is assigned to the most suitable engineer	1	2	3	4	5
your support request is attended with a minimum delay	1	2	3	4	5
(If you provide IT Support) only the support requests which you are responsible will reach you	1	2	3	4	5
(if you provide IT Support) time is not utilized on IT support requests, which you are not responsible	1	2	3	4	5
(if you provide IT Support) you are not evaluated on IT support requests, which you are not responsible	1	2	3	4	5

15. Call Escalation process of an IT Helpdesk will ensure that

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
your support request is resolved within the defined time limits	1	2	3	4	5
your support request is given the attention from the all levels of the IT support team	1	2	3	4	5

16. Self Service and Knowledge management features of an IT Helpdesk will help you

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
to find a solution before requesting help from the IT support team	1	2	3	4	5
to find a solution to your support request with minimum delay	1	2	3	4	5
to find more accurate solution to your support request	1	2	3	4	5
to find solutions suggested to similar support requests, in the past	1	2	3	4	5

Instructions: Please **Highlight** or **Bold** the selected answer

17. Integration of IT Helpdesk and IT Planning Process will ensure that

(Please skip this section if you are not involved with Human resource management or IT planning processes)

	Strongly disagree	Slightly Disagree	Neither disagree or agree	Slightly agree	Strongly agree
to identify the most common IT related problems in your organization	1	2	3	4	5
to allocate IT resources to fulfill the IT needs of your organization	1	2	3	4	5
to identify the human resource needs of your IT support teams	1	2	3	4	5
to identify skills needed by your IT support teams	1	2	3	4	5
to identify the training requirements of your IT support teams	1	2	3	4	5
to identify the training requirements of the IT end users	1	2	3	4	5

Section#4: Identify the motivation behind using/ not using IT Helpdesks



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18. What encourages you to use IT Helpdesk for your IT support requests as an **End User**?

(Please select all)

1. It improves the communication between the end user & the IT support team
2. It minimizes the time taken to provide the solution for your IT support request
3. It improves the quality of the solution provided by the IT support team
4. it allows you to track the status of the IT support request made by you
5. Other (Please Specify):

19. What discourages you to use IT Helpdesk for your IT support requests as an **End User**?

(Please select all)

1. It makes support requesting process more complex
2. It requires you to know more about using computers & internet
3. It highlights your weak areas with respect to your work
4. There are other easier methods to get help from the IT support team
5. Other (Please Specify):

Instructions: Please **Highlight** or **Bold** the selected answer

20. What encourages you to use IT Helpdesk as an **IT Support Provider**?

(Please select all)

1. It improves the communication between the end user & the IT support team
2. It allows you to work only in your responsible area
3. It helps you to manage your time properly
4. It helps you to prove your performances (using statistics of the IT requests made by end users)
5. Other (Please Specify):

21. What encourages you to use IT Helpdesk as an **IT Support Provider**?

(Please select all)

1. It tracks your daily activities
2. It highlights your weak areas, with respect to your work
3. It reduces your free time
4. It has an impact on your privacy
5. Other (Please Specify):



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Section#5: Identify new features of IT Helpdesk and Helpdesk Implementation phases

22. What features from the following list will improve the usage of IT Helpdesk tools?

(Please select all)

9. Creating support tickets via SMS
10. Creating support ticket via telephone calls
11. Creating support tickets via emails
12. "Chatting facility" between the end user and the IT support engineer
13. Video conferencing/ Video calling facility integrated with IT helpdesk tools
14. Integrating multiple knowledge sources into one Knowledge base
15. Accessing the Helpdesk tickets via mobile appliances
16. Other (Please specify):

Instructions: Please **Highlight** or **Bold** the selected answer

23. If you implement an IT Helpdesk, what processes will be considered?

(Please select all)

1. Incident / Request management process
2. Change Management Process
3. Asset Management Process
4. Problem Management process
5. Release Management Process
6. Knowledge Management Process
7. Other (Please specify):

Thank you for the time spent to complete this survey. I'm sure your inputs will contribute a lot to the success of my research.

Sampath Subasinghe



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