

企业、经济与大数据 文献总结 (1)

MIT-Plato 团队

(1) 曹江涛, 苗建军:《模块化时代企业边界变动研究》, 中国工业经济, 2006 (8)

以往研究大多基于定性分析和案例分析来研究模块化对企业边界变动的影响,较少见到运用数理模型的分析。本文在分析模块化时代企业边界的性质、企业边界变动的方式和原因的基础上,建立了企业模块化的数学模型,并运用成本曲线法对模块的分解与整合、替代、去除、增加等模块化操作做了解释。结论认为,在模块化时代,企业边界变动的实质是围绕企业核心能力模块进行的一系列模块化操作。

(2) 蒋峦, 蓝海林, 谢卫红:《企业边界的渗透与模糊》, 中国工业经济, 2003 (4)

本文首先对国内外有代表性的企业边界理论进行了回顾与评述,认为企业边界理论的发展表现出由注重企业外部边界到与内部边界的并重;由静态的企业边界观到动态的企业边界观的变化趋势。在此基础上,本文重点探讨了企业外部边界与内部边界的渗透与模糊趋势。

(3) 曾楚宏, 林丹明:《论企业边界的两重性》, 中国软科学, 2005 (10)

长期以来,学者们对企业边界的研究视角始终放在企业的规模上,难以对企业边界的复杂变动情况作出合理的解释。本文认为,企业的边界具有两重属性,一是由土地、劳动、资本等有形资源决定的规模边界,二是由知识、技术等无形资源决定的能力边界。能力边界是企业边界的核心属性,它的变动决定了规模边界的变动方向。借助这一新的分析思路,本文对当前企业边界的多样化变动趋势进行了讨论,试图给出更合理的解释。

(4) 王珺, 侯广辉:《有限外部化:技术进步对企业边界的影响》, 中国工业经济, 2005 (10)

本文从技术进步的角度动态地研究企业组织边界的变动。通过理论上论证快速的技术进步对内部组织治理与外部交易活动的影响,我们认为快速的技术进步既增大了企业内部化的不确定性,也导致了市场交易费用的降低。但是,由于技术进步并不能完全消除市场交易活动中的不确定性,所以,我们提出了在快速的技术变革条件下,企业边界变动是有限外部化的理论假设。并选择了 1998—2002 年间我国各省市区高新技术产业发展与外包活动作为一个分析案例,验证的结果有力地支持了我们提出的理论假设。

(5) 曾楚宏, 林丹明:《信息技术应用与企业边界的变动》, 中国工业经济, 2004 (10)

信息技术通过节约企业的内部生产成本和市场协调成本影响企业边界的变动,而变动的方向则受到企业组织特征的影响。对于资本密集型企业来说,其组织特征有利于应用信息技术后更显著节约内部生产成本,从而边界朝扩大的方向发生变动;而对于知识密集型企业来说,其组织特征有利于应用信息技术后更显著节约市场协调成本,从而边界朝缩小的方向发生变动。

(6) 杨蕙馨, 李峰, 吴炜峰:《互联网条件下企业边界及其战略选择》, 中国工业经济, 2008 (11)

互联网的出现改变了人们的工作和生活方式,同时也对企业的经营带来影响。企业的边界在互联网条件下呈现出新的变化特点。互联网通过对企业价值链、管理成本、交易成本以及使用互联网成本的作用,改变着企业的边界。通过构建互联网条件下企业边界变化的模型,把握企业边界可能变化的方向,进而提出了对应的四种战略,分别是专业化战略、并购与被并购战略、外包战略以及竞合战略。企业应根据所处的内外部具体条件,选择相匹配的战略。以适应新经济条件下的竞争。

(7) 刘向阳:《企业边界的确定——交易成本观与组织能力观的比较与整合》, 经济评论, 2007 (2)

企业边界是现代企业理论研究的基本问题。交易成本观以经济行为者的“实质理性”、“投机行为”为基本假设,围绕治理成本最小化来解释企业边界的确定;而组织能力观则以经济行为者的“程序理性”、“知识基础的不同”为基本假设,围绕生产价值最大化来解释企业边界的

确定。

(8) 董华, 吴江:《企业边界问题研究新进展》, 经济学动态, 2010 (1)

近年来企业边界研究的新进展表现在,研究视角除了延续威廉姆森开创的对企业一体化行为与企业边界决策的研究传统以外,开始了知识经济下企业边界的变化、劳动分工与企业边界、企业家与企业边界、技术变革与企业边界等问题的研究。这些研究为企业边界理论的创新提供了契机,也使传统的企业边界理论受到了很大挑战。

(9) 张克宏:《云计算对企业行为革命性的影响》, 财会研究, 2010 (22)

云计算大幕的拉开,使许多企业和商业机构在信息化浪潮中有了一种新的革命性的平台,云计算的技术特点必将为提高企业的核心竞争力提供有力的帮助,并对企业的组织形式、企业战略、管理模式以及企业文化等企业行为产生革命性的影响。

(10) 李乔, 郑啸:《云计算研究现状综述》, 计算机科学, 2011 (4)

云计算能够给用户提供了可靠的、自定义的、最大化资源利用的服务,是一种崭新的分布式计算模式。同时,云计算和其他技术及理论的有机结合,也是解决理论研究和实际应用的重要途径。阐述了云计算的基本概念,论述了云计算的优势和存在的问题,比较了云计算不同于以往技术的新特点,剖析了云计算的框架,介绍了不同的云计算服务,并从云计算服务类型和框架层次的角度进行了综述,分析了二者之间的对应关系,概括了围绕云计算框架和不同服务所展开的相关研究工作。结合已有的云计算研究成果,展望了未来的研究方向和亟待解决的关键问题。

(11) 李闽榕:《市场经济必然是信用经济吗》, 经济学家, 2005 (5)

导致社会信用失范的原因是多方面的,需要从市场经济外部和内部两个方面来寻找。“中国人自古不讲信用”的看法是对历史的严重歪曲。马克思无可辩驳地证明了资本对利益的追逐必然要导致市场的信用失范,从而揭示了市场经济与信用缺失问题之间的必然联系。人的市场行为的基本动机是谋求个人利益的最大化,诚信和失信都是作为市场主体的人在市场重复博弈过程中谋求物质利益的行为选择,只要有市场就会发生失信现象,这是古今中外任何市场都无法避免的。市场经济产生着失信的因素,但它并不必然导致社会信用的普遍和严重失范。在完善市场经济假设基础上形成的西方信用经济理论,其理论上的误区是显而易见的,以此来指导我国社会主义市场经济的发展必然会出现实践上的误导。

(12) 李必强:《信息不对称与人的经济行为》, 中国地质大学学报(社会科学版), 2006 (6)

信息不对称及其经济效应是信息经济学研究的中心问题,本文依据信息经济学和行为科学理论,从现实经济生活出发,系统地阐述了信息不对称的内涵,论证了信息不对称的必然性,探讨了信息不对称条件下交易双方的经济行为,提出了信息不对称条件下卖方(或代理方)违规败德行为的函数式,最后讨论了信息不对称造成的经济后果,提出了解决这一问题的思路。

(13) 颜纯钧:《信息不对称与通道设置》, 东南学术, 2002 (3)

2001 年诺贝尔经济学奖授予了研究信息经济学的三位经济学家。本文以信息经济学的理论作为一个讨论的个案,把信息经济学从经济学角度转换为传播学角度,探讨了传播活动中同样存在的信息不对称问题,以及它对一个健全社会所带来的影响。指出必须尊重大众界入社会生活,认同社群身份的欲望与要求,并在社会内部通过设置更多的信息交流通道来加强沟通、化解矛盾、平伏冲突、提高社会的组织化程度。

(14) 张帆, 曾铮:《技术标准与市场要素的关联研究——理论假说以及基于 VAR 模型的经验分析》, 科学学研究, 2009 (6)

运用标准经济学的基本理论,研究技术标准和市场要素之间的关联。首先,文章在相关理论综述后,在标准经济学的理论框架中对技术标准与市场要素之间的关联关系进行了分析,并且给出了四个基本假说命题。接着,文章运用向量自回归模型,对中国的技术标准与市场要素之间的关联度进行了经验研究。研究结果表明,我国技术标准和市场要素之间的关联呈现弱化性、

递减性和单向性的特征。

(15) 陈亮, 王孝炯, 汤纪青:《中国互联网营销市场要素浅析》, 安徽教育学院学报, 2006 (6)

伴随着近几年中国互联网用户的高速增长, 中国互联网网民的组成结构和消费习惯出现了一些新的特点和变化。这种变化从企业的视角看是互联网上的营销市场要素发生了改变, 而具体到消费者层面则源于消费心理的变化和消费行为的改变。

(16) 张卫东:《基于特殊供给和需求的产权交易模式研究》, 河南社会科学, 2007 (2)

现有对产权交易模式的研究大多从案例研究入手或从理论层面分析, 通过对各种交易方式和定价行为的比较, 得出国有企业的最优转让模式。这种研究虽然具有理论意义, 但并不能很好地解释目前国有产权转让实践中形成的交易模式。实际上, 协议转让、拍卖和招投标三种主流转让方式不是独立的、相互排斥的, 或者说是“三者必居其一”的交易模式。在国企产权交易中, 这三种模式结合成具有前后继起性的“一体化”交易模式。这种“一体化”的交易模式主要是考虑了供给与需求的特殊情况。虽然“一体化”交易模式并没有服从价高者得的原则, 但这并不意味着国有资产的“贱卖”或“流失”, 因为它充分考虑了国有产权交易中的非价格因素、目标多元化特征, 它是在满足基准目标基础上的竞价交易, 是让多方都满意的中国特色的产权交易模式。在这种情况下, 国有资产流失只可能发生在两个环节: 一是资产评估环节, 二是评标环节。因而, 要防止国有资产流失, 加强对这两个环节的监督或监管是必要的。

(17) 郭娜, 刘东英:《农产品网上交易模式的比较分析》, 农业经济问题, 2009 (3)

本文通过对农产品网上交易中涉及的四种典型模式进行分析, 明确指出了各种模式的特点、作用, 界定了其能够发挥最大效能的范围, 并结合我国目前农产品流通的特点, 对各种农产品网上交易模式的发展前景做出了初步预测。

(18) 黄峻, 邢洋:《网络团购交易模式初探》, 价格理论与实践, 2011 (4)

本文通过对以往国内外有关网络团购的文献进行研究, 基于网络团购的本质, 综合运用行业考察和案例分析的方式, 对当今国内四种主要的网络团购交易模式的特点及优势进行分析, 并在此基础上初步建立了一种新型的网络营销团购交易模式。

(19) 张丽云, 刘迎秋:《电子数据商业交易模式的推广及其制度构建》, 中国商贸, 2009 (9)

伴随网络技术和通信技术的不断发展, 商业交易模式也在发生着巨大的变化, 尽管传统的面对面的交易模式仍然占据着十分重要的位置, 但是相信在不久的将来新的交易模式, 即数据交换模式将会取代现在的交易模式成为市场的主流, 如何更好地整合资源, 迅速解决阻碍电子商务发展的问题, 成为各方关注的焦点。

(20) 刘江娜:《大数据时代:为什么数据分析能让你的企业脱颖而出》, 现代企业教育, 2013 (3)

大数据来袭, 企业只有一个选择, 那就是颠覆以往的思维方式和管理模式, 接受并尽可能多地掌握数据资源, 利用数据分析, 这样企业的未来才能有所保证。过去的 2012 年, “大数据”成为时髦的名词。2013 年更是被媒体称为“大数据元年”, 一个大规模生产、分享和应用数据的新时代正在开启。据 2012 年 IBM 和牛津大学萨伊德商学院一次名为“现实世界中大数据的使用”研究显示, 越来越多的企业承认竞争优势与大数据有关。

(21) Faith Sternlieb, R. Patrick Bixler, Heidi Huber-Stearns, Ch'aska Huayhuaca, A question of fit: Reflections on boundaries, organizations and social. ecological systems Review Article, Journal of Environmental Management, Volume 130, 30 November 2013, Pages 117-125

Although there is acknowledgment that the complexity of social-ecological systems governance demands representation from diverse perspectives, there is little agreement in the literature on how to cross both *fiat* (human-demarcated) and *bona fide* (physical) boundaries to address such complexities.

As a cohort of interdisciplinary scholars, we navigate the boundary between science and practice to address the question of fit regarding the role of organizations in transcending boundaries. We found there is a need to rectify discrepancies between theories about boundaries and theories about organizations. To this end, we propose a conceptual framework to analyze *transboundary organizations*, an umbrella term to group the literature on boundary organizations, intermediaries and bridging organizations; we introduce this term to illustrate they are not mutually exclusive and to facilitate interdisciplinary research. We first examine social-ecological systems (SES), a framework intended to improve understandings of boundaries and governance. We then continue to unpack the complexity of boundaries and organizations, specifically through important transboundary concepts such as scale and organizational learning. This helps frame our examination of the literature on: 1) boundary organizations; 2) bridging organizations (third-party entities); and 3) intermediaries (distinguished by their position between other actors). Our review identifies a number of discrepancies that pertain to the types of boundaries discussed and the roles assigned to organizations governing SES. Important characteristics have emerged from our review of transboundary organizations including legitimacy, saliency, urgency, and credibility. In developing a conceptual framework, we argue that transboundary organizations: 1) expand upon the boundary spectrum, 2) incorporate transboundary concepts, and 3) hybridize characteristics of boundary, bridging, and intermediary organizations. We conclude with a number of considerations for transboundary organizations and recommendations for further research.

(22) Guillaume Chanson, Bertrand V. Quélin, Decentralization and contracting out: A new pattern for internal and external boundaries of the firm Original Research Article European Management Journal, In Press, Corrected Proof, Available online 13 March 2013

This paper is devoted to the pattern of activity within large companies, through the two criteria of decentralization and contracting out. Our goal is to understand whether the determinants are identical for both internal and external boundaries of the firm. One literature stream contributes to the analysis of the internal structure and organization of divisional companies, studying the functions assigned to headquarters or divisions. Another part of the literature has focused on the boundaries of the firm issues and the firm's core activities. Few works are at the junction of these two traditions. This study builds on an empirical study dedicated to the book publishing industry. Our analysis leads to discuss determinants of internal and external borders. We show that functions or activities with high potential of economies of scale are mainly centralized and internalized. On reverse, those related to core business and non-programmable functions are mostly at divisional level and contracted out.

(23) Vojislav Maksimovic, Gordon Phillips, N.R. Prabhala, Post-merger restructuring and the boundaries of the firm Original Research Article Journal of Financial Economics, Volume 102, Issue 2, November 2011, Pages 317-343

We examine how firms redraw their boundaries after acquisitions using plant-level data. We find that there is extensive restructuring in a short period following mergers and full-firm acquisitions. Acquirers of full firms sell 27% and close 19% of the plants of target firms within three years of the acquisition. Acquirers with skill in running their peripheral divisions tend to retain more acquired plants. Retained plants increase in productivity whereas sold plants do not. These results suggest that acquirers restructure targets in ways that exploit their comparative advantage.

(24) Ulrich Lichtenthaler, Relative capacity: Retaining knowledge outside a firm's boundaries Original Research Article Journal of Engineering and Technology Management, Volume 25, Issue 3, September 2008, Pages 200-212

Besides internalizing external knowledge, companies may maintain knowledge in interfirm relationships

over time. Thus, interorganizational relations may be regarded as an extended knowledge base to which a firm has privileged access. We merge research into knowledge management, absorptive capacity, learning, and dynamic capabilities to analyze knowledge retention outside a firm's boundaries. Prior research into knowledge management has focused on internally storing knowledge, whereas research into knowledge transactions has primarily studied the internalization of external knowledge. The need to dynamically manage knowledge in interfirm relations over time . without necessarily internalizing this knowledge . has been relatively neglected. Therefore, we develop the foundations of the dynamic capability-based concept of relative capacity as a complement to absorptive capacity and transformative capacity in external knowledge retention. Relative capacity contributes to explaining interfirm differences in knowledge strategies, alliance strategies, organizational boundaries, open innovation, and performance. To guide further research, propositions are advanced regarding the antecedents and consequences of relative capacity.

(25) Ola Kvaløy, Do norms matter for firm boundaries? Original Research Article The Journal of Socio-Economics, Volume 37, Issue 3, June 2008, Pages 969-975

Even though norms have been integrated in the formal theory of the firm, we have not seen a clear-cut relationship between norms and firm boundaries. In a simple game of relationship specific investments, I show that the parties'reputation for being trustworthy may be decisive for optimal asset ownership.

(26) John Cantwell, Grazia D. Santangelo, The boundaries of firms in the new economy: M&As as a strategic tool toward corporate technological diversification Original Research Article Structural Change and Economic Dynamics, Volume 17, Issue 2, June 2006, Pages 174-199

Following the dynamic capabilities approach, we understand the recent wave of M&As as a corporate strategy mainly stimulated by the increasingly complex and uncertain techno-socio-economic environment in which firms operate. In this new situation, the boundaries of firms are in greater flux since firms are unable to develop individually all the competencies required to keep pace with the continual redefinition of business lines being driven by corporate competition. Using US patents granted to the world's largest firms, this paper analyses the dynamics of the sectoral specialisation of corporate technological profiles following large shocks that require some M&A deal. The findings of the analysis enable us to evaluate the adoption of M&As as a strategic tool to reshape corporate technological boundaries. On these grounds, we are able to identify patterns of technological diversification into strategic fields according to different models of industrial technological development.

(27) Franco Malerba, Richard Nelson, Luigi Orsenigo, Sidney Winter, Public policies and changing boundaries of firms in a history-friendly model of the co-evolution of the computer and semiconductor industries Original Research Article Journal of Economic Behavior & Organization, Volume 67, Issue 2, August 2008, Pages 355-380

In this paper, we explore the effects of alternative policies, ranging from antitrust to public procurement, open standards, information diffusion and basic research support on the dynamics of two vertically related industries in changing and uncertain technological and market environments. The two industries are a system industry and a component industry, and the evolution of these industries is characterized by periods of technological revolutions punctuating periods of relative technological stability and smooth technical progress. We have been inspired by the co-evolution of the computer and component industries from their inceptions to the 1980s. On the basis of that evolution, we have developed a history friendly-model this co-evolution. In sum, this paper has stressed that various types of policies may sometimes have contrasting effects on the industry, mainly on concentration and technical change and innovation. It has also shown that the consequences of policies may spillover from one industry to

another, and from one type of firms to another. Policies that aim at a specific industry may provoke major changes in a related industry through the product market, the changing boundaries of firms or knowledge and technological interdependencies. The policy maker has to be aware of that. Finally, a major point of the paper regards the unintended consequences of policies.

(28) Vivien Walsh, Design, innovation and the boundaries of the firm Original Research Article Research Policy, Volume 25, Issue 4, June 1996, Pages 509-529

This paper's purpose is to make a first attempt at analysing the design function from a variety of disciplinary perspectives: economic, sociological and management. It explores what design is, and compares it to R&D and technological innovation. It surveys the literature on technological innovation and considers its usefulness in understanding and analysing the design function. It then examines the organisation and location of design activities in relation to manufacturing firms, referring to empirical studies of a number of contrasting sectors of industry in various countries, as well as to an historical analysis of the evolution of the design function.

(29) Kuangnen Cheng, Zu-Hsu Lee, Hamid Shomali, Airline firm boundary and ticket distribution in electronic markets Original Research Article International Journal of Production Economics, Volume 137, Issue 1, May 2012, Pages 137-144

The electronic markets hypothesis (EMH) predicts that the intense intrusion of information technology (IT) into the market system has a strong influence on the degree of market coordination. As transaction costs go down due to inexpensive IT-enabled exchange of information, market-based economic activities increase. Contrary to the predictions of the EMH, US legacy airlines have increasingly relied on hierarchical governance and oppose market-based economic activities. Using US legacy airline distribution strategies as an example, this paper demonstrates that even dominant players in an oligopolistic industry, operating during the explosive evolution of electronic markets, are subject to the predictions set by the EMH. Predictions of the EMH are tested by analyzing 17 years of operational data, using the DEA (data envelopment analysis) method. Tobit regression is executed in tandem with DEA to test the hypothesis that various strategies deployed by the legacy airlines have a strong impact on operational performance. Despite the perceived market power possessed by the strongest players, and the apparent inverse relationship between IT-driven distribution and production within hierarchies, the end results reveal that legacy airline business strategies, such as disintermediation to exclude downstream players or vertical integration to compete with rivals, have created a negative impact on the business performance of airlines. Operational efficiency has not improved.

(30) Stephen Brown, Stephen A. Hillegeist, Kin Lo, Conference calls and information asymmetry Original Research Article Journal of Accounting and Economics, Volume 37, Issue 3, September 2004, Pages 343-366

We hypothesize that conference calls are voluntary disclosures that lead to long-term reductions in information asymmetry among equity investors. Cross-sectional and time-series tests show that information asymmetry is negatively associated with conference call activity. Firms initiating a policy of regularly holding conference calls experience statistically and economically significant and sustained reductions in information asymmetry, in contrast to one-time callers, who experience no significant decline in asymmetry. Since prior work shows that the cost of equity capital is increasing in the level of information asymmetry, our results suggest that firms that hold conference calls more frequently have lower costs of capital.

(31) Stephen Brown, Stephen A. Hillegeist, Kin Lo, The effect of earnings surprises on information asymmetry Original Research Article Journal of Accounting and Economics, Volume 47, Issue 3, June

2009, Pages 208-225

We examine the effect of earnings surprises on changes in information asymmetry. We hypothesize and find that asymmetry is lower (higher) in the quarter following positive (negative) earnings surprises compared to firms that meet the consensus analyst earnings forecast. The relations between earnings surprises and information asymmetry are stronger when the surprises are more likely to capture investors' attention. Examining the source of these changes, we show that decreased information search activities is the most important factor for asymmetry declining after positive surprises; for negative surprises, decreased uninformed trading plays a dominant role increasing asymmetry.

(32) Juan Luis Nicolau, Ricardo Sellers, The quality of quality awards: Diminishing information asymmetries in a hotel chain Original Research Article Journal of Business Research, Volume 63, Issue 8, August 2010, Pages 832-839

Services suffer to a great extent from information asymmetries because their attributes are more difficult to grasp in advance. Within services, the tourism industry is an especially notable and interesting case. Akerlof [Akerlof, G. The market for lemons: Quality uncertainty and the market mechanism. Quarterly Journal of Economics 1970; 84 (3): 488. 500.] suggests the applicability of information asymmetries and counteracting institutions to hotel chains. To reduce these asymmetries different strategies have been proposed. Among them, quality certificates have become one of the most popular tools. However, two questions arise: one, are quality certificates effective tools to reduce information asymmetries in the tourism industry, with its inherent uncertainty? and two, are all types of existing quality certificates equally effective? Thus, the objectives of this study include analyzing the market value variation of a hotel chain due to quality certification, and to test the effect by type of award. The method builds from the event study technique and regression analysis. The results show that the stock market reacts positively to certificates, thus implying that quality certification can be a useful tool for reducing information asymmetry; however, this positive reaction is not equal for all kinds of certificates, the ISO 9000 shows the highest impact.

(33) Tobias Dehlen, Thomas Zellweger, Nadine Kammerlander, Frank Halter, The role of information asymmetry in the choice of entrepreneurial exit routes Original Research Article Journal of Business Venturing, In Press, Corrected Proof, Available online 8 November 2012

Our quantitative study investigates the determinants of internal versus external exit routes in family firms. Building on information asymmetry theory, we examine how an owner's inferior knowledge about the abilities of potential external entrants (in contrast to family internal successors) renders a family internal transfer more likely. This information asymmetry, however, can be mitigated by activities such as owners' screening and transfer candidates' signaling efforts to reveal the candidates' abilities. Our data exhibits a positive effect of signaling and an inverted U-shaped effect of screening on the probability of external exit routes. Firm age, as a driver of emotional attachment, weakens these effects.

(34) Md. Tanzim Khorshed, A.B.M. Shawkat Ali, Saleh A. Wasimi, A survey on gaps, threat remediation challenges and some thoughts for proactive attack detection in cloud computing Original Research Article Future Generation Computer Systems, Volume 28, Issue 6, June 2012, Pages 833-851

The long-term potential benefits through reduction of cost of services and improvement of business outcomes make Cloud Computing an attractive proposition these days. To make it more marketable in the wider IT user community one needs to address a variety of information security risks. In this paper, we present an extensive review on cloud computing with the main focus on gaps and security concerns. We identify the top security threats and their existing solutions. We also investigate the challenges/obstacles in implementing threat remediation. To address these issues, we propose a proactive threat detection model by adopting three main goals: (i) detect an attack when it happens, (ii)

alert related parties (system admin, data owner) about the attack type and take combating action, and (iii) generate information on the type of attack by analyzing the pattern (even if the cloud provider attempts subreption). To emphasize the importance of monitoring cyber attacks we provide a brief overview of existing literature on cloud computing security. Then we generate some real cyber attacks that can be detected from performance data in a hypervisor and its guest operating systems. We employ modern machine learning techniques as the core of our model and accumulate a large database by considering the top threats. A variety of model performance measurement tools are applied to verify the model attack prediction capability. We observed that the Support Vector Machine technique from statistical machine learning theory is able to identify the top attacks with an accuracy of 97.13%. We have detected the activities using performance data (CPU, disk, network and memory performance) from the hypervisor and its guest operating systems, which can be generated by any cloud customer using built-in or third party software. Thus, one does not have to depend on cloud providers security logs and data. We believe our line of thoughts comprising a series of experiments will give researchers, cloud providers and their customers a useful guide to proactively protect themselves from known or even unknown security issues that follow the same patterns.

(35) Niroshinie Fernando, Seng W. Loke, Wenny Rahayu, Mobile cloud computing: A survey Original Research Article Future Generation Computer Systems, Volume 29, Issue 1, January 2013, Pages 84-106

Despite increasing usage of mobile computing, exploiting its full potential is difficult due to its inherent problems such as resource scarcity, frequent disconnections, and mobility. Mobile cloud computing can address these problems by executing mobile applications on resource providers external to the mobile device. In this paper, we provide an extensive survey of mobile cloud computing research, while highlighting the specific concerns in mobile cloud computing. We present a taxonomy based on the key issues in this area, and discuss the different approaches taken to tackle these issues. We conclude the paper with a critical analysis of challenges that have not yet been fully met, and highlight directions for future work.

(36) Xun Xu, From cloud computing to cloud manufacturing Original Research Article Robotics and Computer-Integrated Manufacturing, Volume 28, Issue 1, February 2012, Pages 75-86

Cloud computing is changing the way industries and enterprises do their businesses in that dynamically scalable and virtualized resources are provided as a service over the Internet. This model creates a brand new opportunity for enterprises. In this paper, some of the essential features of cloud computing are briefly discussed with regard to the end-users, enterprises that use the cloud as a platform, and cloud providers themselves. Cloud computing is emerging as one of the major enablers for the manufacturing industry; it can transform the traditional manufacturing business model, help it to align product innovation with business strategy, and create intelligent factory networks that encourage effective collaboration. Two types of cloud computing adoptions in the manufacturing sector have been suggested, manufacturing with direct adoption of cloud computing technologies and cloud manufacturing- the manufacturing version of cloud computing. Cloud computing has been in some of key areas of manufacturing such as IT, pay-as-you-go business models, production scaling up and down per demand, and flexibility in deploying and customizing solutions. In cloud manufacturing, distributed resources are encapsulated into cloud services and managed in a centralized way. Clients can use cloud services according to their requirements. Cloud users can request services ranging from product design, manufacturing, testing, management, and all other stages of a product life cycle.

(37) Mark D. Ryan, Cloud computing security: The scientific challenge, and a survey of solutions

Original Research Article Journal of Systems and Software, Volume 86, Issue 9, September 2013, Pages 2263-2268

We briefly survey issues in cloud computing security. The fact that data are shared with the cloud service provider is identified as the core scientific problem that separates cloud computing security from other topics in computing security. We survey three current research directions, and evaluate them in terms of a running software-as-a-service example.

(38) Arnon Rosenthal, Peter Mork, Maya Hao Li, Jean Stanford, David Koester, Patti Reynolds, Cloud computing: A new business paradigm for biomedical information sharing Review Article Journal of Biomedical Informatics, Volume 43, Issue 2, April 2010, Pages 342-353

We examine how the biomedical informatics (BMI) community, especially consortia that share data and applications, can take advantage of a new resource called "cloud computing". Clouds generally offer resources on demand. In most clouds, charges are pay per use, based on large farms of inexpensive, dedicated servers, sometimes supporting parallel computing. Substantial economies of scale potentially yield costs much lower than dedicated laboratory systems or even institutional data centers. Overall, even with conservative assumptions, for applications that are not I/O intensive and do not demand a fully mature environment, the numbers suggested that clouds can *sometimes* provide major improvements, and should be seriously considered for BMI. Methodologically, it was very advantageous to formulate analyses in terms of component technologies; focusing on these specifics enabled us to bypass the cacophony of alternative definitions (e.g., exactly what does a cloud include) and to analyze alternatives that employ some of the component technologies (e.g., an institution's data center). *Relative* analyses were another great simplifier. Rather than listing the absolute strengths and weaknesses of cloud-based systems (e.g., for security or data preservation), we focus on the changes from a particular starting point, e.g., individual lab systems. We often find a rough parity (in principle), but one needs to examine individual acquisitions: is a loosely managed lab moving to a well managed cloud, or a tightly managed hospital data center moving to a poorly safeguarded cloud?

(39) Osvaldo Ferreira, Fernando Moreira, Cloud Computing Implementation Level in Portuguese Companies Original Research Article Procedia Technology, Volume 5, 2012, Pages 491-499

The Information Technology (IT) has suffered many advances in recent years due to the development of new hardware and software solutions. These major changes have been noted in recent times in how we interact with applications and services in IT. Cloud Computing provides services and applications over the Internet with the promise of infinite capacity and service models of "pay-as-you-go". This paper describes the main characteristics of Cloud Computing, future expectations and analyzes the state of knowledge and implementation in Portuguese companies.

(40) Stephen Mason, Esther George, Digital evidence and "cloud" computing Original Research Article Computer Law & Security Review, Volume 27, Issue 5, September 2011, Pages 524-528

The term "cloud computing" has begun to enter the lexicon of the legal world. The term is not new, but the implications for obtaining and retaining evidence in electronic format for the resolution of civil disputes and the prosecution of alleged criminal activities might be significantly affected in the future by "cloud" computing. This article is an exploratory essay in assessing the effect that "cloud" computing might have on evidence in digital format in criminal proceedings in the jurisdiction of England & Wales.

(41) Mohd Zamri Murah, Teaching and Learning Cloud Computing Original Research Article Procedia - Social and Behavioral Sciences, Volume 59, 17 October 2012, Pages 157-163

Cloud computing is a technology that allow the users to access software applications, hardware, storage, computing processes directly from the web. It offers two paradigms in computing; SaaS and PaaS. This

paper reviewed the experience of using cloud computing in teaching a graduate level networking course. It had been used to share references, to create collaborative environments, to hold virtual discussions, to manage projects and to deploy web applications. The students were able to learn this latest computing technology without incurring any cost. This technology had enriched the learning processes of the students through collaborative learning, group projects and web-based software development.

(42) Dan Svantesson, Roger Clarke, Privacy and consumer risks in cloud computing Original Research Article Computer Law & Security Review, Volume 26, Issue 4, July 2010, Pages 391-397

While vaguely defined, and wide in scope, so-called cloud computing has gained considerable attention in recent times. Put simply, it refers to an arrangement under which a user relies on another party to provide access to remote computers and software, whose whereabouts, including their jurisdictional location, are not known nor controllable by the user. In this article, we examine the privacy and consumer risks that are associated with cloud computing.

(43) Prashant Gupta, A. Seetharaman, John Rudolph Raj, The usage and adoption of cloud computing by small and medium businesses Original Research Article International Journal of Information Management, Volume 33, Issue 5, October 2013, Pages 861-874

Cloud computing has become the buzzword in the industry today. Though, it is not an entirely new concept but in today's digital age, it has become ubiquitous due to the proliferation of Internet, broadband, mobile devices, better bandwidth and mobility requirements for end-users (be it consumers, SMEs or enterprises). In this paper, the focus is on the perceived inclination of micro and small businesses (SMEs or SMBs) toward cloud computing and the benefits reaped by them. This paper presents five factors influencing the cloud usage by this business community, whose needs and business requirements are very different from large enterprises. Firstly, ease of use and convenience is the biggest favorable factor followed by security and privacy and then comes the cost reduction. The fourth factor reliability is ignored as SMEs do not consider cloud as reliable. Lastly but not the least, SMEs do not want to use cloud for sharing and collaboration and prefer their old conventional methods for sharing and collaborating with their stakeholders.

(44) Vanessa Ratten, Cloud computing: A social cognitive perspective of ethics, entrepreneurship, technology marketing, computer self-efficacy and outcome expectancy on behavioural intentions Original Research Article Australasian Marketing Journal (AMJ), Volume 21, Issue 3, August 2013, Pages 137-146

Cloud computing is one of the most important trends in technology innovation but its widespread adoption by individuals remains unexplored. The main purpose of this paper is to examine behavioural intentions towards cloud computing in an educational setting through the use of social cognitive theory. A survey questionnaire was tested amongst a sample of young consumers to develop an understanding of entrepreneurial inclination, ethical tendencies, technology marketing, computer self-efficacy and outcome expectancy on behavioural intention and learning effectiveness of cloud computing technology. The results indicated that ethical tendencies and technology marketing are indicators of behavioural intention to adopt cloud computing as an educational learning resource. The statistical analysis conducted supports the view that social cognitive theory can help to understand the main internal and external drivers of increasing an individual's intention to adopt cloud computing as a learning instrument. This paper contributes to the interactive technology, educational and technology marketing literature by integrating social cognitive theory with cloud computing services to highlight the importance of individual's learning about innovations and adopting them in a higher educational setting.

(45) Nabil Sultan, Cloud computing: A democratizing force? Original Research Article International

Journal of Information Management, Volume 33, Issue 5, October 2013, Pages 810-815

There has never been a more disruptive innovation in the IT landscape such as cloud computing since the emergence of the Web in the early 1990s. This IT delivery service has the potential to change many aspects of organizations' operations, thinking, culture, work and their ability to control global warming. With the increasing ubiquity and pervasiveness of mobile devices, cloud computing's impact could be even greater and much wider in its reach. But this emerging innovation has many hurdles to surmount to become the telephone or the water equivalent of the IT world. An examination of these issues will be made in this article and an exploration of the empowering and democratizing credentials of cloud computing will be attempted.

(46) Sean Marston, Zhi Li, Subhajyoti Bandyopadhyay, Juheng Zhang, Anand Ghalsasi, Cloud computing - The business perspective Original Research Article Decision Support Systems, Volume 51, Issue 1, April 2011, Pages 176-189

The evolution of cloud computing over the past few years is potentially one of the major advances in the history of computing. However, if cloud computing is to achieve its potential, there needs to be a clear understanding of the various issues involved, both from the perspectives of the providers and the consumers of the technology. While a lot of research is currently taking place in the technology itself, there is an equally urgent need for understanding the business-related issues surrounding cloud computing. In this article, we identify the strengths, weaknesses, opportunities and threats for the cloud computing industry. We then identify the various issues that will affect the different stakeholders of cloud computing. We also issue a set of recommendations for the practitioners who will provide and manage this technology. For IS researchers, we outline the different areas of research that need attention so that we are in a position to advise the industry in the years to come. Finally, we outline some of the key issues facing governmental agencies who, due to the unique nature of the technology, will have to become intimately involved in the regulation of cloud computing.

(47) Slaven Brumec, Neven Vr ek, Cost effectiveness of commercial computing clouds Original Research Article Information Systems, Volume 38, Issue 4, June 2013, Pages 495-508

This paper presents the procedure for comparing costs of leasing IT resources in a commercial computing cloud against those incurred in using on-premise resources. The procedure starts with calculating the number of computers as depending on parameters that describe application's features and execution conditions. By measuring required execution time for different parameter values, we determined that this dependence is a second-order polynomial. Polynomial coefficients were calculated by processing the results of fractional factorial design. On that basis we calculated costs of computing and storage resources required for the application to run. The same calculation model can be applied to both a personal user and a cloud provider. The results will differ because of different hardware exploitation levels and the economy of scale effects. Such calculation enables cloud providers to determine marginal costs in their services' price, and allows users to calculate costs they would incur by executing the same application using their own resources.

(48) Angela Lin, Nan-Chou Chen, Cloud computing as an innovation: Perception, attitude, and adoption Original Research Article International Journal of Information Management, Volume 32, Issue 6, December 2012, Pages 533-540

Cloud computing is a current trend that reveals the next-generation application architecture and it is estimated that by 2013 the cloud market will have reached \$8.1bn. While cloud services such as webmail, Flickr and YouTube have been widely used by individuals for some time, it not until relatively recently that organisations have begun to use cloud services as a tool for meeting their IT needs. This study aims to

investigate how cloud computing is understood by IT professionals and the concerns that IT professionals have in regard to the adoption of cloud services. The study was carried out in Taiwan and used a survey by interview approach to understand IT professionals' understandings and concerns about cloud computing. The findings of the study suggest that while the benefits of cloud computing such as its computational power and ability to help companies save costs are often mentioned in the literature, the primary concerns that IT managers and software engineers have are compatibility of the cloud with companies' policy, IS development environment, and business needs; and relative advantages of adopting cloud solutions. The findings also suggest that most IT companies in Taiwan will not adopt cloud computing until the uncertainties associated with cloud computing, e.g. security and standardisation are reduced and successful business models have emerged.

(49) Mansour Jalali, Asgarali Bouyer, Bahman Arasteh, Maryam Moloudi, The Effect of Cloud Computing Technology in Personalization and Education Improvements and its Challenges Original Research Article Procedia - Social and Behavioral Sciences, Volume 83, 4 July 2013, Pages 655-658
With emergence of electronic systems and removal of paper, virtual technologies and electronics are becoming important. This paper discusses the importance of electronic training and emphasizes on its qualitative and quantitative development for some organizations or technical science and engineering students. The main focus of paper is on utilizing grounds of training based on usual network infrastructures such as internet or advanced distributed systems such as cloud computing environments. Finally, in new environments such as cloud computing, service composition and presenting virtual machine based on student's requirements and abilities significantly is more important that we address some problems in this issues.