

AN EMPIRICAL STUDY OF THE KEY DRIVERS AND INHIBITORS TOWARDS E-BUSINESS ADOPTION: A MULTI-COUNTRY COMPARISON

Kay Hooi (Alan) Keoy, *Khalid Hafeez, **Jawed Siddiqi

*Centre for Ethnic Entrepreneurship and Management, Bradford University, School of Management,
Emm Lane, Bradford, BD9 4JL, UK, Tel: +44(0)1274234423*

**The York Management School, University of York, Heslington, York, YO10 5DD, UK*

***Informatics Research Group, Sheffield Hallam University, City Campus, Sheffield, South Yorkshire,
UK S1-1WB, Tel +44(0) 114 225 3781*

khkeoy@brad.ac.uk , hafeez100@gmail.com , J.I.Siddiqi@shu.ac.uk

ABSTRACT

This paper identifies the potential drivers and inhibitors in order to minimise risks and maximise the benefits of an e-business initiative. A comparative analysis using percentage mean score is used to investigate the key drivers and inhibitors for adopting e-business technology across multiple organisations (351 firms from Malaysia and UK). Our investigation discovered that the top three drivers for Internet use for the Malaysian companies were the “market expansion for existing products (58.1 %),” “customer demand (39.5 %),” and “new markets (52.0 %)” which ranked higher than the UK’s percentages. “Customer demands” appeared to be relatively the same weight overall for Malaysia (39.5%) and UK (35.7%). However, “suppliers demand” overall is comparatively one of the lowest drivers for e-business implementation for the Malaysian (18.6 %) as well as UK sectors (30.5 %). “Government incentives” factor was ranked the weakest driver for the Malaysian sample (14.2 %) in comparison with the UK sample (41.6 %). However, Malaysian companies shared similar opinions with the UK companies with regards to “concern about data and security” issues (51.5% versus 47.3%). There are specific anxiety for Malaysian companies, such as “business laws do not support e-commerce” and “inadequate legal protection for Internet purchases were reported as one of the top two obstacles (56.6 % and 59.3%, respectively). In comparison respondents from the UK companies considered these barriers to be a moderate obstacle (36.5% and 34.3%, respectively). It is also fair to say that Malaysian companies are facing bigger problems in finding suitable workforce with relevant e-business expertise (30.1%) than UK companies (22.5%). Overall, in comparison, UK companies clearly see the full potential of e-business to leverage their global presence and enhance their revenue through

close coordination with key partners. The results from this study provide useful guidelines for companies to assess their strengths and weaknesses toward adopting Internet technology.

KEYWORDS

E-Business Adoption, Drivers, Inhibitors

1. INTRODUCTION

With the emergence of Internet technology, companies are facing new challenges such as intensive global competition, more demanding customers, rapidly shrinking product life cycles and short response time. As a result, companies are racing against time to achieve the competitive advantage by offering a wider range customer of product and service portfolio. E-business is defined as the application of information and communication technologies to facilitate the execution of related functions like marketing management, strategy leverage, information systems, logistic management, customer relationship management, and human resources management (Simpson and Docherty, 2004). There is an extensive literature that discusses the potential benefits of e-business (Brown, 2002). However, organisations need to consider a range of challenges presented by e-business adoption (Stansfield and Grant, 2003). It is observed that most of the e-business studies are largely based upon the experience of e-business implementation in the developed countries (Huang *et al.*, 2004). Factors such as the availability, cost and quality of information, services and equipment have been evaluated. This paper identifies and tests the key drivers and inhibitors in an effort to ensure the successful adoption of e-business in a multi-sample two countries context.

2. THEORETICAL UNDERPINING

Mariotti and Sgobbi (2001) argue that most of the existing e-business literature remains prescriptive, and concentrates on computer software and technology infrastructure. Researchers have often identified other factors that shaped organisational usage of IT and its consequences (Lanford, 2004). Hafeez *et al.* (2006a) note that a fully integrated Enterprise Resource Planning (ERP) solution and Customer Relations Management (CRM) is possible only if a company is willing to adopt organizational, technological as well as attitudinal changes. The literature suggests that many companies have adopted e-business without realising the associated strategic, operational and behavioural impacts (Marshall and Mackay, 2002). Consequently, many companies have faced operational and financial failure.

Through an extensive literature review, we have conducted a force field analysis showing the key drivers and inhibitors for e-business adoption as illustrated in Figure 1. Force field analysis allow to focus at the factors (*forces*) that influence a situation either driving movement toward a goal (helping forces) or blocking movement toward a goal (hindering forces) (Lewin, 1943). We have clustered key drivers for e-business adoption under *Market*, *Strategy*, and *Government Incentives* constructs. Similarly, key inhibitors are categorised under *Business Environment*¹, *Organisation Resources*, and *Legal Policies* constructs as explained in the subsequent sub sections.

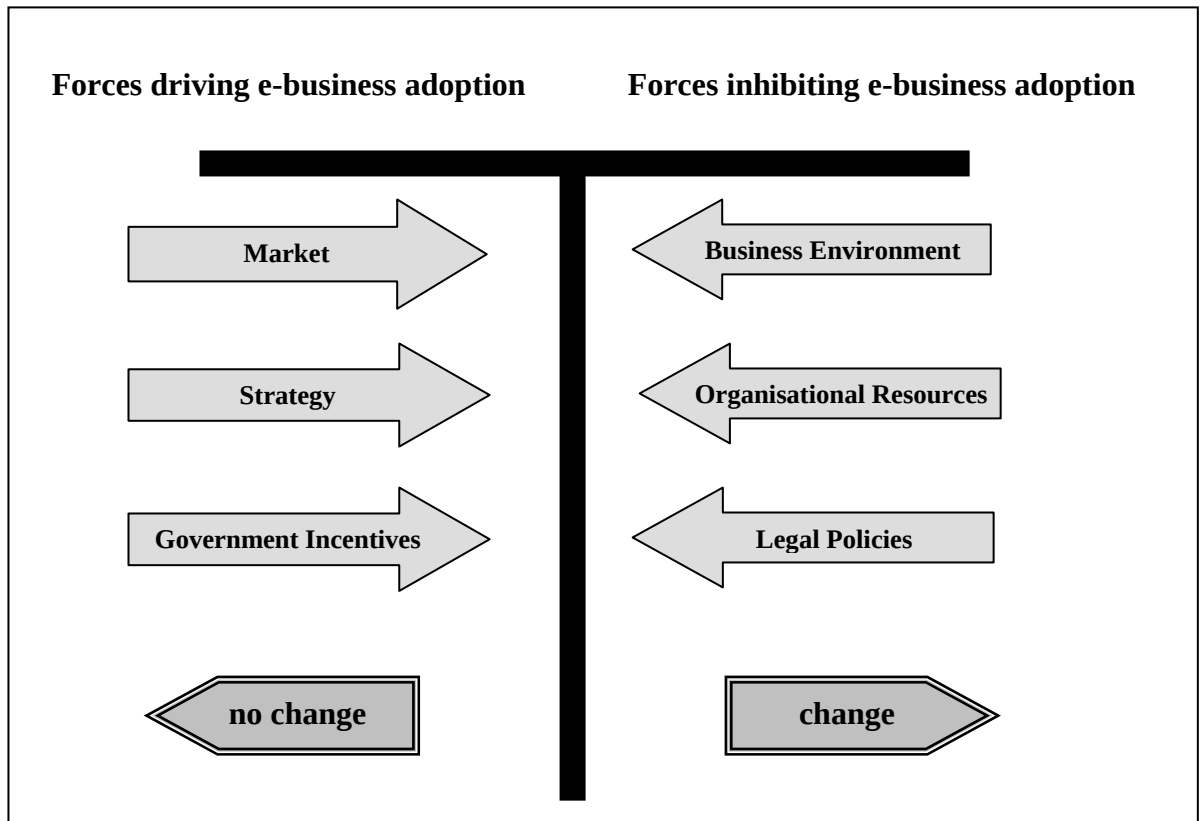


Figure 1. Force Field Analysis of E-Business Adoption

2.1 Market

E-business can help to realize customer needs and help to provide new and better products or services. For example, customer relationship management (CRM) applications will be able to track customer behavior, predict their future demand and send direct e-mail communications (Winer, 2001). A fully integrated ERP solution, such as CRM, is possible only if a company is part of a fully integrated supply chain (Hafeez et al., 2006b). One of the important drivers for an organisation to adopt e-business is the demand from its supply chain members. As a result of adopting e-business across the supply chain pipeline, organisations are able to create linkages with suppliers, service providers, and customers (Hafeez et al., 1996). Companies can re-engineer and integrate their internal supply chain planning processes and technology to develop unified solutions through e-business adoption (Keoy and Hafeez, 2004).

Expansion of existing markets, entering into new business, and improving coordination with customers and suppliers are cited as the major benefits of e-business adoption. Equipped with richer information about downstream markets, e-business can improve firm's responsiveness to market dynamics and help to expand sales channels hence enhance revenue opportunity. Improved coordination amongst customers and suppliers would allow an

organisation to streamline and automate workflow activities that would result in efficiency, accuracy of operations, shorter cycle times, and improved service levels.

2.2 Strategy

Michael Porter (2001) asserts that Internet has been a major influencing factor for attaining competitive advantage in recent years; therefore, it is worth discussing at the strategic level. Along with Porter, various other authors suggest that a company's business strategy should address the following four issues in the context of e-business adoption:

- i.) articulation of the e-business value proposition (Kaefer and Bendoly, 2004);
- ii.) estimation of the cost structure and profit potential of the offering through e-business channels (Rivard *et al.*, 2006);
- iii.) identification of the organisational and behavioural drivers such as compensation and budgets (Lumpkin *et al.*, 2002);
- iv.) mapping of the functional and resource alignments to implement (e)-business strategy (Chen *et al.*, 2005).

Porter (2001) argues that e-business firms need to make a shift in their thinking - from "e-business to business", from "e-strategy to strategy". This is necessary as the Internet has now become a well-established phenomenon and should be treated as an essential and usual part of business strategy.

2.3 Government Incentives

Governmental agencies play an important role as the lead-user of e-business if various business and private-sector related activities are to be encouraged to move online. E (electronic)-government can take the form of various online transactions such as company registration, taxation, applications for a variety of employee- and business-related requirement. Jutla *et al.* (1999) suggest that SMEs and micro business have insufficient knowledge of information technology and e-business. Such businesses also suffer from lack of relevant resource to invest in relevant e-business expertise. Under the circumstances, Government can disseminate information about e-business policies, best practice and obstacles in order to facilitate e-business adoption (Wagner *et al.*, 2003).

2.4 Organisational Resource

Organisational inability to utilise Internet capabilities has been identified as one of the barrier for e-business (Farhoomand *et al.*, 2000). The lack of experience among some managers can be a major impediment to implement e-business (Farhoomand *et al.*, 2000). The introduction of new (Internet) technology into an organisation requires management support to motivate staff for adopting new technology as negative attitudes can lead to detrimental impacts (Chircu and Kauffman, 2000). Adopting e-Business requires additional investment and resources, such as hardware and software, as insufficient investments is identified as a critical barrier to the continuing growth of e-business (Chircu and Kauffman, 2000). In addition, knowledge barriers may occur due to the lack of investment in training for employees.

2.5 Business Environment

Business environment factors such as “security” and “trust” are major impediments for organisations to use Internet channels for commerce (Black et al., 2001). Problems relating to security such as failure of operating systems, or disruption of information access breaches lead to numerous problems (Min and Galle, 1999). In addition, consumers are concerned with the infrastructure of Web security systems (Black et al., 2001). With Internet banking, security is one of the most important challenges due to the possible misuse of credit card and providing personal information over the web (Black et al., 2001). In order to build trust among business partners and consumers, organisations’ must overcome the barrier of security by building as a reputation competent technology-based e-business service provider (Westland, 2002).

2.6 Legal Policies

One other major concern is the legal protection for Internet purchase. It is important to have government policies to protect consumer to cover against unfair and deceptive trading practices by suppliers, unauthorized access and usage from hackers etc. A lack of specific laws governing Internet banking and internet purchases, customers hesitate to use it (Larpsiri et al., 2002). Companies therefore are cautious in making transactions over the Internet because of the lack of supporting law about electronic documents as legal evidence specifically in the developing countries (Farhoomand et al., 2000). The existing legal system especially in most developing countries is not sufficient to protect those engaged in e-business.

3. QUESTIONNAIRE DESIGN

Table 1 gives the key drivers and inhibitors that have been included in the questionnaire survey. The table also includes a list of coding for each sub-category which is used in the subsequent analysis. The questionnaire is structured under the key drives and inhibitors context. Sub-categories for each construct is also illustrated. A five point, Likert scale was the main instrument used as a means of investigating the respondent’s perception on a wide range of cause and effect relationships. Issues such as size of sample, language, and sample structure were considered in order for information to be communicated effectively.

Table 1. Key Drivers and Inhibitors used in the Questionnaire

Key Drivers		Key Inhibitors	
Code	Market	Code	Organizational Resource
(DM1)	Customers demanded it	(IO1)	Level of ability to use the Internet as part of business strategy
(DM2)	Suppliers required it	(IO2)	Lack of supply chain managerial ability
Strategy		(IO4)	Making needed organizational changes
(DS1)	To expand market for existing products/service	(IO6)	Lack of investments

(DS2)	To enter new businesses or markets	Business Environment	
(DS3)	To cope with intense global competition	(IB1)	Concern of security and integrity of data on Internet
(DS4)	To improve coordination with customers	(IB2)	Lack of trust/confidence among supply chain members
(DS6)	To enhance revenue opportunity	(IB3)	Credit card use in the country
Government Incentives		Legal Policies	
(DP1)	Government provided incentives	(IG1)	Business laws do not support e-commerce
		(IG2)	Inadequate legal protection for Internet purchases

4. SAMPLE PROFILE

The survey was distributed amongst Malaysian and UK SMEs to evaluate the perception of Internet use in the context of developed and developing countries. We selected six industrial sectors that had previously been identified as the leading sectors in e-business adoption (UNCTAD, 2001; Daniel *et al.*, 2002; Daniel, 2003). These include “Manufacturing”, “Services”, “Information Technology”, “Finance, Insurance, and Real Estate”, “Wholesale and Retail Trade”, and “Others” (agriculture, communication, utility services). Equal sample sizes (fifty) of firms were selected for each sector. There are unequal numbers of SMEs in these six sectors in Malaysia and UK. Stratified sampling with probabilities not proportional to stratum size (Dawson, 1998) was used to enable comparisons between sectors. While such an approach could restrict the generalisation of the results, it allows for a focus on the issues in industries where e-business is rapidly becoming institutionalised. Sample sizes and response rates are reported in Table 2. A predetermined number of targets completes were about 50 per industry category per country. Eligible respondent were the individual qualify to fill up the questionnaire and aware of the company’s business activities. The response rate recoded as 69.3 % in Malaysia and 47.7 % in UK, with an overall average of 58.5 percent (Table 2). Our final data set contains 351 respondents. Based on the data collected, sector based analyses are carried out by using percentage of mean scores. Both of the data sample has passed validity and reliability tests (Hafeez et al. 2006b, Keoy and Hafeez, 2005).

Table 2. Demographic characteristics of the survey participants (n= 351)

Industries	Malaysian sample	UK sample
	Respondents (out of 50)	
Manufacturing	30	25
Services	28	20
IT`	43	30
Finance, Insurance and Real Estate	35	20
Wholesale and Retail Trade	32	23
Others (agriculture, communication, utility services, non	40	25

AN EMPIRICAL STUDY OF THE KEY DRIVERS AND INHIBITORS TOWARDS E-BUSINESS
ADOPTION: A MULTI-COUNTRY COMPARISON

classified)				
Total number of respondent (out of 300)			208	143
Response Rate (%) (out of 300)			69.3 %	47.7 %
Job Title	IS	CIO, CTO, VP of IS IS manager, director, planner Other manger in IS department	108 (51.9 %)	70 (49 %)
	Non IS	CEO, president, managing director COO, business operations manager CFO, administration / finance manager Others (IS analyst, marketing VP, other manager)	100 (48.1 %)	73 (51 %)
Keyword				
CIO	Chief Information Officer		CTO	Chief Technology Officer
VP	Vice President		IS	Information System
COO	Chief Operating Officer			

4.1 Survey Bias

Before formally testing the hypothesis, we have to examine whether there was any bias in our data set, since the respondents include both IS and non-IS managers. The sample is split into two groups: IS managers (CIO, CTO, VP of IS, IS managers, IS director, IS planner, and other manger in IS department) versus non IS mangers (CEO, president, managing director, COO, business operations managers, CFO, administration/finance manager and other managers). We have performed Mann-Whitney U (non-parametric method) test to determine if two samples are from the same population. An insignificant result ($p > 0.05$) demonstrated that the two samples are the same and do not differ. We further computed the Kolmogorov-Smirnov test statistic to test the null hypothesis that the sample distribution of the IS manager group is equal to that of the non-IS manager group. The results are shown in Table 3. The p-value associated with each test statistics on each item is insignificant ($p > 0.05$). With this concern addressed, we will combine the two groups together for hypothesis testing of variance. Both test statistics were performed using the SPSS software package, which suggests the two groups do not differ significantly, in terms of sample mean and the sample distribution (Keoy et al., 2005) (Table 3).

Table 3. IS Manager versus None IS- Managers for Non Bias Survey

Items measuring e-business performance (five-point Likert scale)	IS Managers		Non- IS Managers		Mann-Whitney test		Kolmogorov-Smirnov test	
	Mean	S.D	Mean	S.D	z-score	p-value	z-score	p-value
DM1	3.21	0.88	3.04	0.92	-1.48	0.14	0.76	0.62
DM2	3.04	0.66	2.99	0.87	-0.50	0.62	0.44	0.99
DS1	3.03	0.76	2.99	0.87	-0.42	0.67	0.55	0.93
DS2	3.14	0.93	3.19	1.02	-0.46	0.64	0.57	0.89

DS3	3.21	0.88	3.04	0.92	-1.48	0.13	0.76	0.62
DS4	3.04	0.56	2.99	0.87	-0.50	0.62	0.41	0.90
DS6	3.03	0.67	3.11	0.87	-0.42	0.67	0.55	0.93
DP1	3.21	0.88	3.04	0.92	-1.43	0.11	0.73	0.45
IO1	3.04	0.73	2.99	0.87	-0.48	0.60	0.44	0.99
IO2	3.03	0.74	2.99	0.87	-0.42	0.58	0.55	0.73
IO4	3.14	0.93	3.00	1.02	-0.52	0.55	0.57	0.89
IO6	3.15	0.93	3.12	0.92	-0.42	0.67	0.26	0.35
IB1	3.02	0.98	3.08	1.04	-0.49	0.63	0.40	0.99
IB2	3.14	0.93	3.19	1.02	-0.44	0.56	0.57	0.89
IB3	2.96	0.93	3.19	1.12	-0.46	0.64	0.57	0.19
IG1	3.11	0.93	2.99	0.92	-0.39	0.61	0.26	0.21
IG2	3.02	0.98	3.08	1.04	-0.49	0.63	0.24	0.82

5. SURVEY FINDINGS AND DISCUSSIONS

5.1 Key Drivers for the E-Business Adoption

Table 4 indicates the drivers for e-business adoption in Malaysia and UK surveyed firms among different industry sectors. The top three drivers for Internet use for the Malaysian companies were the “market expansion for existing products (58.1 %),” “customer demand (39.5 %),” and “new markets (52.0 %)” which ranked higher than the UK’s percentages. “Customer demands” appeared to be relatively the same weight overall for Malaysia (39.5%) and UK (35.7%). Manufacturing (Mac: 48.5% versus 45.2 %) and wholesale/retail (WRT: 44.1% versus 38.1 %) sectors in Malaysia and UK considered fulfilling customer request through e-business adoption. However, “suppliers demand” overall is one of the lowest drivers for e-business implementation for the Malaysian sectors (18.6 %) as well as UK sectors (30.5 %). Overall, 59.3 % of the category “other” sector in Malaysia viewed “new market” as a significant driver. “Market expands for existing products” scored highest rate for WRT sector (63.2 %). This reflects the local focus of Malaysia’s retailers (WRT) and manufacturing (Mac), who seek to expand their market through Internet. The use of Internet use for “entering new businesses or markets” scored respectively, 59.3 % and 61.2% for the Malaysian and UK wholesale/retail (WRT) sector.

The use of Internet by organisation may take from a simple web interface development, purchase supplies to sell products and services. However, there will be a significant amount of time spent on Internet adoption and development interferes with the core business activity (Poon and Swatman, 1999). Additionally, customer demand is beginning to move organisation along the Internet adoption ladder, particularly among those organisation that are preferred suppliers (Poon, 2000). Traditional EDI is the mandated means of order processing by many major customers and suppliers, particularly in the UK manufacturing (Levy and Powell, 1998). Many organisations have invested heavily in EDI and their current dilemma is whether to fulfill customer demands to move to Internet based systems. However, suppliers are more reluctant to adopt e-business due to complexity of technologies like EDI, which could require new skills and cost of implementation that will inhibit future development.

AN EMPIRICAL STUDY OF THE KEY DRIVERS AND INHIBITORS TOWARDS E-BUSINESS
ADOPTION: A MULTI-COUNTRY COMPARISON

Drivers such as "to cope with intense global competition (15.2 % versus 48.8 %)", "to improve coordination with customers and suppliers (28.7 % versus 38.8 %)" and "to enhance revenue opportunity (24.5 % versus 45.6%)" scored relatively low for Malaysia, compared to the UK sample. In comparison, e-business development is relatively more mature in the UK. Therefore, the UK companies clearly see the full potential of e-business to leverage their global presence and enhance their revenue through close coordination with key partners.

"Government incentives" factor was ranked the weakest driver for the Malaysian sample (14.2 %) in comparison with the UK sample (41.6 %). This comes as a surprise as Malaysian government has invested a lot of money to encourage IT enabled services through its "Multimedia Media Super-corridor (MSC)" and e-government initiatives. Perhaps companies are expecting more support such as training from Malaysian government departments to encourage them to adopt e-business.

As shown in Table 4, e-business implementation in Malaysia seems at an early stage. The focus is more on creating value (products/services), to expand existing market for new or existing products/service and to enter new businesses or markets. However, more than often competition in global competition may become the primary e-business objectives only when companies have successfully established their business locally.

Table 4. Drivers for E-business adoption for the Malaysian and UK sectors

Key Drivers	Percentage score for each Sectors (%)													
	Mac		Serv		IT		FIR		WRT		Others		Overall Percentage	
	M	UK	M	UK	M	UK	M	UK	M	UK	M	UK	M	UK
Market														
DM1	48.5	45.2	41.7	38.1	35.4	31.5	39.8	36.3	44.1	38.1	27.2	25.2	39.5	35.7
DM2	21.3	33.3	24.1	35.2	20.1	31.2	10.3	19.5	21.4	38.2	14.3	25.4	18.6	30.5
Strategy														
DS1	63.2	33.6	53.2	21.3	63.2	32.3	54.7	31.3	71.2	65.2	43.2	36.5	58.1	36.7
DS2	53.2	53.5	35.2	22.6	56.3	33.4	48.9	38.9	59.3	61.2	59.3	51.3	52.0	43.5
DS3	18.1	59.6	11.2	53.5	21.2	52.2	20.1	33.3	10.3	63.2	10.1	31.2	15.2	48.8
DS4	53.3	59.3	30.3	33.2	25.8	36.3	19.2	33.3	22.1	33.2	21.6	37.2	28.7	38.8
DS6	44.5	65.2	26.7	56.1	31.4	44.5	11.8	25.3	11.1	47.1	21.2	35.2	24.5	45.6
Incentives														
DP1	21.1	40.3	12.1	41.3	14.1	54.3	9.2	41.2	11.4	41.2	17.1	31.2	14.2	41.6
Key Legend														
Mac	Manufacturing				FIR		Finance, Insurance and Real Estate							
Serv	Services				WRT		Wholesale and Retails Trade							
IT	Information Technology				Others		Others (agriculture, communication, utility services, non classified)							

5.2 Inhibitors for E-Business Adoption

The mean values provided in Table 5 demonstrate the key inhibitors for e-business implementation across the two samples. E-business implementation involves thoughtful changes in the business organisation, government regulation, and human experience. Malaysian companies shared similar opinions with the UK companies in the "concern about data and security" issues (51.5% versus 47.3%). However, there are concerns specific to the

Malaysian companies, such as “business laws do not support e-commerce” and “inadequate legal protection for Internet purchases were reported as one of the top two obstacles (56.6 % and 59.3%). However, respondents from the UK companies considered these barriers to be a moderate obstacle (36.5% and 34.3%). While company across industries were concerned about the issue of security and privacy, this barrier was more prevalent in the finance (68.3%) and wholesale/ retail sectors (67.3 %) than in the other sectors in Malaysia. In addition, the problem of inadequate legal protections for electronic trade was most worried by the Malaysian companies in the retail/wholesale sector. The issue of security and privacy are primary concern for business activities of any sector that is involved with financial transactions, which could obstruct the acceptance of electronic banking and payment by the businesses and consumers.

Table 5. Inhibitors of e-business adoption for the Malaysian and UK samples

Key Inhibitors	Percentage score for each Sectors (%)													
	Mac		Serv		IT		FIR		WRT		Others		Overall Percentage	
	M	UK	M	UK	M	UK	M	UK	M	UK	M	UK	M	UK
Organisational Resource														
IO1	21.3	24.3	24.4	27.4	23.4	13.4	25.7	23.4	23.6	30.5	21.4	28.4	23.3	24.6
IO2	31.2	25.5	37.4	14.5	25.3	19.5	29.5	26.7	25.4	24.5	31.7	24.5	30.1	22.5
IO4	34.5	21.2	32.3	12.4	29.4	22.2	25.5	23.3	29.2	22.2	23.3	12.2	29.0	18.9
IO6	33.2	21.2	23.3	21.2	14.2	15.5	32.2	21.2	25.6	18.7	21.2	14.4	25.0	18.7
Business Environment														
IB1	63.3	55.6	49.3	46.6	53.3	43.3	61.4	56.3	45.3	44.3	36.2	37.6	51.5	47.3
IB2	60.3	56.3	45.5	40.5	48.5	42.5	42.2	38.5	59.6	48.5	43.3	37.5	49.9	44.0
IB3	34.3	51.2	23.3	56.6	32.3	68.6	19.5	46.3	21.2	68.3	34.5	57.5	27.5	58.1
Government Policies														
IG1	53.3	35.2	43.2	30.6	57.2	39.3	65.3	39.3	67.3	41.3	53.2	33.2	56.6	36.5
IG2	45.3	38.3	65.3	34.8	53.6	31.6	68.3	24.6	76.3	34.0	46.9	42.4	59.3	34.3

It is fair to say that Malaysian companies are facing bigger problems in finding suitable workforce with insight e-business expertise (30.1%) than UK companies (22.5%). The growing economy of Malaysia has created a demand for skilled knowledge workers and professionals. Table 3 shows that the service (37.4%) and manufacturing sectors (31.2%) experiencing the highest shortage of skilled labor expertise in Malaysia. One reason for this may be due to Tigre and Dedrick (2002) who suggest that traditionally, these sectors pay relatively lower salaries in comparison with other sectors. As a result, this sector may face difficulties in attracting skilled people. To address this issue, the Malaysian government is investing in a high quality, comprehensive education system designed to meet the demands of the evolving workplace.

The problem of skill shortage seems to be associated with insufficient experience to specific applications and business environments, rather than to the lack of basic skills. In Malaysia, the overall growth of graduates with technical degrees in engineering, mathematics, telecommunications, and computer sciences are likely to match industry demand (Ong, 2001). A positive indicator of availability in IT capabilities revealed by this survey was the level of ability to use the Internet as part of business strategy. This was considered marginally less of a barrier in Malaysia (23.3 %) than in the UK (24.6 %). Results also revealed that Malaysian

AN EMPIRICAL STUDY OF THE KEY DRIVERS AND INHIBITORS TOWARDS E-BUSINESS
ADOPTION: A MULTI-COUNTRY COMPARISON

wholesale/retail (WRT) and IT sectors have relatively less problem in finding e-business expertise.

Malaysian sample was less concerned with the necessary organisational changes to accommodate e-business operations (29%), which may be attributable to the flexibility of the Malaysian companies that considered their major strength in international competition. Nevertheless, in terms of establishing ways of formulating appropriate business strategies to make their e-business operations a success, it is of equal concern to both samples, at least in the finance and retail/wholesale sector. Interestingly, both Malaysia (25.0%) and the UK (18.7%) sectors did not identify the lack of investments as the major obstacle for e-business adoption.

In summary, in comparison with the UK sample, respondents from the Malaysian considered the government policies that aim to protect the security of traders are the most important conditions for e-business, with the importance of security of data on Internet and credit card also being regarded as useful facilitators for e-business. Business law and legal protection are considered important by the financial and wholesale/retails sector, in addition to the education of customers. Accepting the new modes of transactions is also important for the Malaysian companies to further implement e banking as a way of doing business. From the above discussion, competitive international pressure is the most influential factor driving the diffusion of e-business in Malaysia compared with UK (Figure 2 and Figure 3).

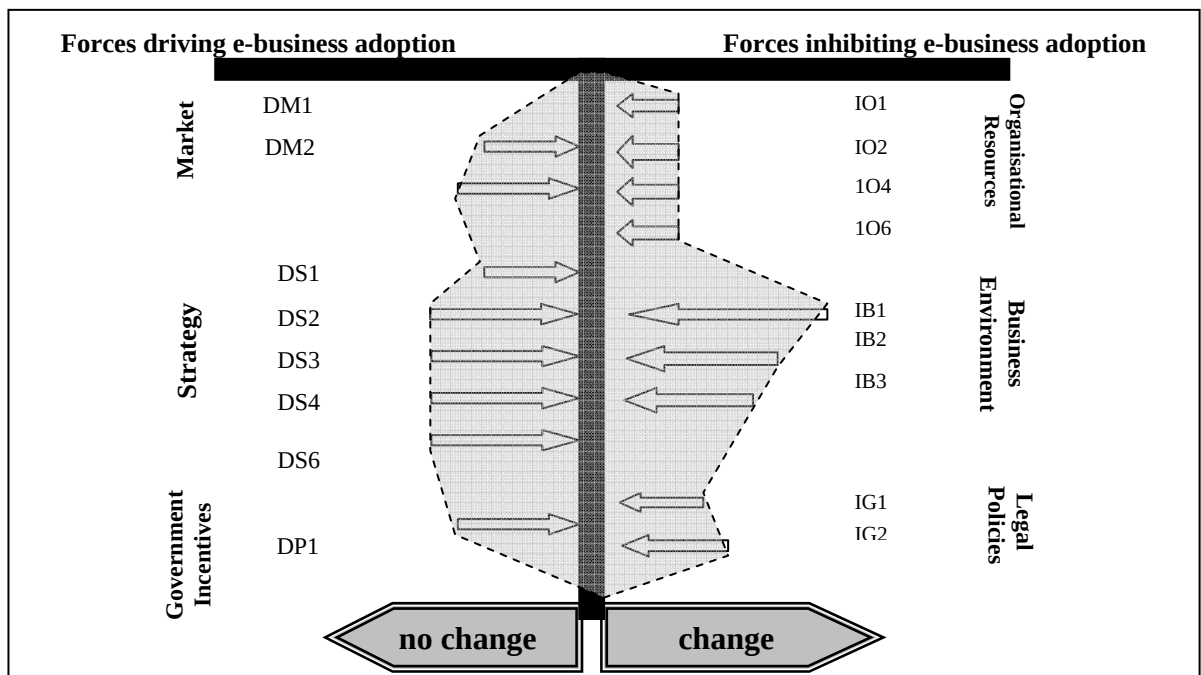


Figure 2. Force Field Analysis of Drives and Inhibitors for UK sample (actual scale in %)

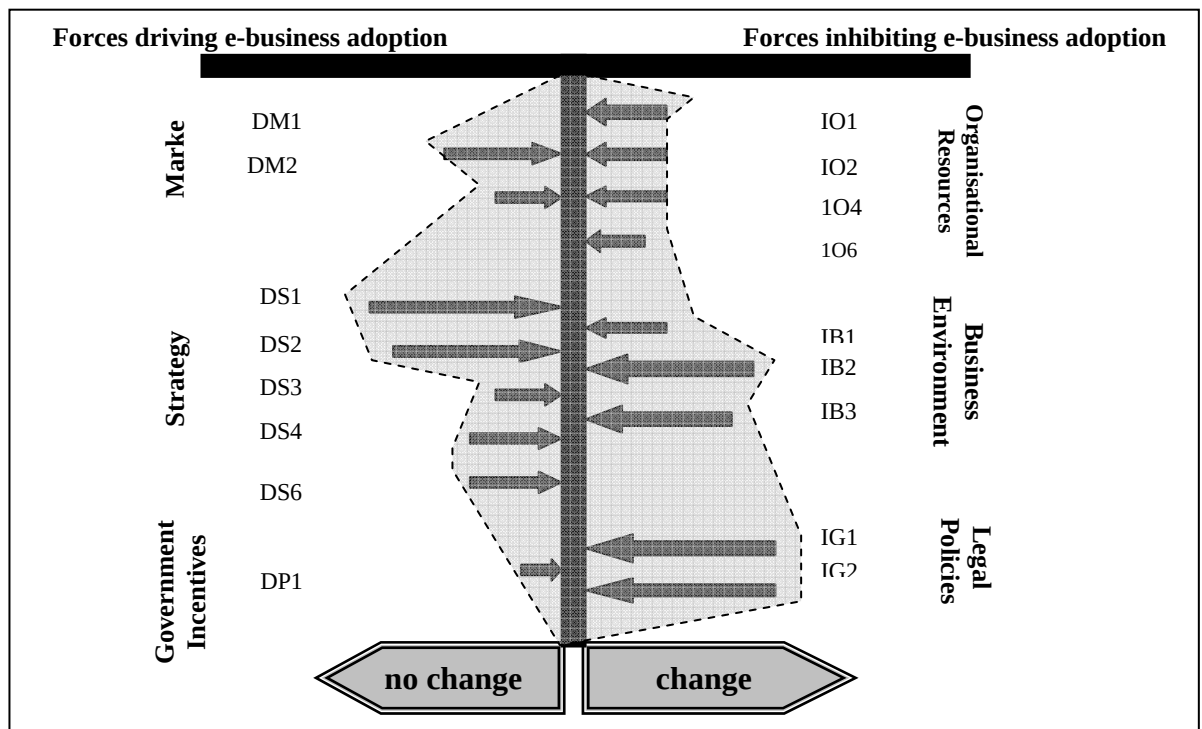


Figure 3. Force Field Analysis of Drives and Inhibitors for Malaysian sample (actual scale in %)

6. IMPLICATIONS AND RECOMMENDATIONS

During the course of this research, the authors have taken a focused approach into consideration when selecting and critiquing the existing e-business literature. Although the key drivers and inhibitors are identified that will have an impact on companies in the multi-country context, these do not take into consideration the cross-cultural aspect (such as leadership, and socio-economic background) between countries. That is to say the review takes into account a wider aspect of the study and does not simply concentrate on an element in Malaysia or the UK. Therefore, the questionnaire survey and theoretical model in this study were constructed through a generalised approach that adopted to investigate e-business adoption issues in a multi-country context.

It would be an added benefit to expand findings obtained from the quantitative study by conducting qualitative investigations in a case study format. As stated by Patton (1987), “case studies are useful where one needs to understand some particular problems in great depth and identify rich information that can be learned from few exemplars of the phenomenon in question”. The future case study based research could complement and further assess and test the applicability of the e-business capability factors as well as identify and investigate any potential benefits, obstacles or emerging themes associated with it. These cases could be from

either existing respondents or new respondents. A few organisations from each industry consisting of non-adopters of e-business sub-groups from both surveyed samples could also be chosen to investigate in depth the reasons for the slow uptake of e-business in their organisations. It is hoped that this combination of quantitative and qualitative study will further support and verify the applicability and robustness of the conceptual model proposed in this study. In addition, a longitudinal study could be pursued to see how the survey companies have moved on their e-business maturity using Earl's (2000) model in particular.

A comparative analysis of the e-business drivers and inhibitors for the two samples (see Figure 2 and Figure 3) show that Malaysian companies have a slight edge in developing e-strategy compared with the UK sample. Government incentives have the greatest driving forces for e-business adoption in Malaysia. Malaysia has been developing its information highway capacity since late 1990s. This is realised by the investment of RM 40 Billion (approximately £ 5.9 billion) to establish Multimedia Development Corporation (MDC). The Multi-media Super Corridor (MSC) is one of the key initiatives of MDC (Low *et al.*, 2000). The purpose of MSC is to "enable Malaysia to leapfrog into the information age and to create an environment that will attract world class companies, thereby making Kuala Lumpur a "regional information hub" (Mohammad, 1998). However, they seem to be suffering due to the inadequate legal policies to protect online transactions. Also UK companies seem to be relatively benefited with government incentive compared with Malaysian companies.

Our research also support findings from the Smyth and Ibbotson's (2001) survey regarding the potential differences in sectoral adoption (Wagner *et al.*, 2002) that argue the e-business adoption vary across SMEs in different business sector. Firms that positioned themselves in the "new economy" by embracing Internet technology will be expected to have a greater degree of success than traditional firms. For example Leadbeater (2000) suggests that high growth business supported by e-business adoptions are characterised by "success strategies" which implies that the growth is an organization outcome that reflects the choice made by the managers in these firms.

7. CONCLUSIONS

The benefits of adopting e-business allows manufacturing companies to provide better service to their customers, to improve the efficiency of internal processing and to reduce inventory costs,. While IT, service and "other" sectors in the study focuses on improving customer service and increase their business performance. The primary motivation factor behind e-business adoption for both countries is to better serve customers, and the Internet allows firms to improve the efficiency of their internal processes and to enhance staff productivity. Our investigation discovered that the top three drivers for Internet use for the Malaysian companies were the "market expansion for existing products," "customer demand " and "new markets" which ranked higher than the UK's percentages. "Customer demands" appeared to be relatively the same weight overall for Malaysia and UK. However, "suppliers demand" overall is comparatively one of the lowest drivers for e-business implementation for the Malaysian as well as UK sectors.

In order to conduct e-business successfully, organisations from both samples must perform ongoing training programs to develop and sustain the e-commerce proficiency of their employees. In addition, specifically in the Malaysian context, Government should further

promote e-business initiative, spreading the awareness and benefits of Internet and e-business, creating laws concerning buying and selling through the Internet, on the back of developing a stronger digital communication infrastructure. The results from this study would provide useful guidelines for companies to assess their strengths and weaknesses towards adopting an e-business strategy.

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AN EMPIRICAL STUDY OF THE KEY DRIVERS AND INHIBITORS TOWARDS E-BUSINESS
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