

*Full Length Research Paper*

# The impact of website development on organisation performance: Malaysia's perspective

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**This study focuses on the impact of website development on organisation performance in Malaysia. The study of Website development will be based on four factors (planning and preparation; development and design; management and maintenance; and security, privacy and trust) and organisation performance will be based on three factors (internal, market and competitive factors). The finding shows that there is a positive correlation between Website development and organisation performance. Even the study found that Website development has a significant impact on organisation performance, but the overall of the research model is not a good-fit model. This can be referred to goodness of fit index (GFI) (0.472), root mean square error of approximation (RMSEA) (0.196), adjusted goodness of fit index (AGFI) (0.384) and normed Fit Index (NFI) (0.368), which does not achieve the recommended values (0.900).**

**Key words:** Website development, organisation performance, good-fit.

## INTRODUCTION

The Web first became widely available to the public in 1993 (Kiani, 1998) and businesses began to adapt wireless technology to the Internet (Senn, 2000; Liang and Wei, 2004; Chu et al., 2007). The emergence of E-Business has been changing each phase of the traditional wholesale and retail supply chain (Tang and Huang, 2008). Thus, the design of a Website has bearing on the likelihood of adopting electronic business (Flavián and Gurrea, 2008). Several underlying forces coming together have caused Website the earlier explosion of utilisation (Kiani, 1998):

1. The development of graphical and user-friendly browsers based on point-and-click.
2. The development of software and hardware tools that can be used to create rich content, the emergence of open standards in development tools and at the network protocol level.
3. The growth in support services such as Web business design, hosting and gateway services that help accelerate adoption.
4. The development of critical processes such as ordering, billing and payment.

Website is a key component of a company's success. First, the Website represents a company, conveying a company's culture, values and vision to its customers. Second, the Website can be viewed as a delivery mechanism for a collection of services that facilitate various tasks a customer needs to perform in the overall purchase cycle. The Website also provides a platform through which a company can interact with customers. Finally, the Website enables an organisation to compete globally (Tang and Huang, 2008).

A number of studies have been done related to the impact of the Website development and design on organisation performance, especially related to process and performance (Examples: Avlonitis and Karayanni, 2000; Pires and Aisbett, 2002; Lichtenthal and Eliaz, 2003; Tang and Huang, 2008; and Scaglione et al., 2009). However, no research has been done in Malaysia.

## LITERATURE REVIEW

### Website development

The design of a quality Website as part of E-Business

strategy has become a key element for success in the online market (Hernández et al., 2009). The quality of Website designs depends on task, performance and development (Brajnik, 2001). It is important to understand what skills (technical, business and analytical) and knowledge are required for successful Website development to work; how such skills and knowledge are used in actual practice, and how such skills and knowledge can be improved (Taylor et al., 2001). Many studies analyse the importance of adequate Website development concentrating on four aspects: Usability (design and functionality) (Moustakis et al., 2006; Zhao and Dholakia, 2009; and Chen et al., 2010); content (Robbins and Stylianou, 2003; Moustakis et al., 2006; and Zeng et al., 2009); speed and responses rate (Palmer, 2002; and Boshoff, 2007); and security, privacy and trust (Udo, 2001; Ranganathan and Ganapathy, 2002; Wong and Law, 2005; Cases et al., 2010; and Chen et al., 2010).

Website design starts with the planning and preparation that refer to the corporate objectives as the guideline (Clyde, 2000). In the Website development, two important characteristics need to be focused: content and design. Both characteristics were measured by means of features (objectively) and perceptions (subjectively) (Huizingh, 2000). The management and maintenance process that needs to be focused are ensuring that new pages meet the quality and usability requirements, indexing and full maintenance (Bevan, 1999). A number of informal development models for Websites can be identified under a variety of guises. Cunliffe (2000) found that an informal Website development model covers establishing the need before the Website is adopted as a solution; gathering information before any Website development takes place; developing and evaluating before creating the complete site; implementation should be done once all design decisions have been finalised; and maintain (Table 1).

### Organisation performance

Organisations recognise the importance of the Web as a conduit for acquiring knowledge about customers, competitors and partners. They provide Website that aims to facilitate Web users' acquisition of knowledge about their organisations' activities, archives, products and services (Fang and Holsapple, 2006). The evolving computing and communication technologies enable companies to gain tremendous operational efficiencies, personalisation, and information based products and services. E-Commerce market space is seen as promising and that it could generate positive performance implications if it is reflected in corporate strategy (Chang et al., 2003).

A number of studies found that Website or internet has a strong impact on organisation's processes and performance. Avlonitis and Karayanni (2000) found that there is

substantial positive effect of the use of the Internet on sales management activities, market-oriented product management activities, and sales performance and efficiency. Adoption of the E-commerce gives either positive or negative perception to the marketer due to the advantages and disadvantages of E-Commerce. The overall of E-Commerce activities have impacts on firms' internally, market and competitive environments (Table 2) (Pires and Aisbett, 2002). A study done by Lichtenthal and Eliasz (2003) found that companies use the internet to alter existing industry structures and business processes to improve company information, redefine their information with clients, leverage global resources and pioneer new business models. Another study done by Tang and Huang (2008) found that there is a strongest impact on Website use and that the improvement of customer satisfaction can significantly increase organisation performance. A study on website adoption and sales performance in Valais' hospitality industry by Scaglione et al. (2009) found that E-business has little effect on productivity in small enterprises, but positive effects on performance in large firms. The observed patterns suggested that Internet technologies might have a positive impact on hotel performance via improved marketing and distribution.

### Research objectives

The main objective of this study is to investigate the impact of Website development on organisation performance, as well as correlation between these two factors in Malaysia. This research also tries to study a good-fit of model, based on correlation between Website development and organisation performance. Thus, we address four main research questions:

1. Is there high mean score for Website development and organisation performance?
2. Is there a correlation between Website development and organisation performance?
3. Is there a significant impact of Website development on organisation performance?
4. Is this research framework is a good-fit model?

### Research gap

This study attempts to fill the void by developing a structural equation model to examine the interrelations of Website development and organisation performance (Figure 1). Most of the literature on Website development has focused on planning and preparation (Bevan, 1999), design and development (Clyde, 2000; Moustakis et al., 2006; Zhao and Dholakia, 2009; and Chen et al., 2010), management and maintenance (Huizingh, 2000).

**Table 1.** Informal development model, tasks and usability methods for Websites.

<b>Stage</b>	<b>Usability method</b>
<b>Establish the need – before the Web is adopted as a solution</b>	
Information providing business objectives whether a Website is the right solution.	One-to-one meetings
Define success	Brainstorming
<b>Gather information – before any Web development takes place</b>	
Competitive analysis	Competitive analysis
Key users	Focus groups
Key user characteristics	Interviews
Key user tasks	Surveys
Information objects	Questionnaires
Relevant published research	Scenarios
Reusable content resources	Customer pathways
Appropriate guidelines and heuristics	Review appropriate existing studies of user information-related behaviour Design team brainstorming
<b>Develop and evaluate – before creating the complete site</b>	
Design look and feel	Web design guidelines
Structure and chunking	Card sorting
Create prototypes	Focus groups
Evaluate prototype usability	Prototype testing
Evaluate prototype accessibility	Online feedback forms
Evaluate conformance to guidelines	Questionnaires Scenarios Think-aloud methods Direct observation Interviews Structural analysis Inspection/ walkthrough methods
<b>Implementation – once all design decisions have been finalised</b>	
Validate	Continuing competitive analysis
Check internal and external links	Online questionnaire
Launch	Email feedback
Publicise	Search terms analysis Log analysis
<b>Maintenance – continuously after site has been launched</b>	
Monitor site use	Search terms analysis
Check external links	Log analysis
Gather user feedback	Online questionnaire
Monitor changing business objectives	E-mail feedback
Monitor changes in technology	Continuing competitive analysis
Continue competitive analysis	
Continue to understand key users	

Source: Cunliffe (2000)

**Table 2.** Implications to business from adopting E-Commerce.

<b>Advantage</b>	<b>Disadvantage</b>
<b>Internal factor</b>	
<p>Increased profits; leverage of scarce corporate resources</p> <p>Increased revenue and sales</p> <p>Reduced start-up capital needs and lower overheads once started</p> <p>Reduced costs: material, transaction, operation, marketing, distribution; reduced inventories</p> <p>More diverse business activities and economies of scope</p> <p>Economies of scale possible</p> <p>Better control over industry supply chains</p> <p>Disintermediation; enhanced supplier–reseller relationships</p> <p>Improved sales tracking and improved marketing</p> <p>Shorter product development cycles; shorter supply chain</p> <p>Accelerated transactions, with faster cash generation; automated buying processes</p> <p>Increased flexibility and responsiveness</p> <p>Improved internal processes and sharing of internal best practice; access to commercial research</p>	<p>Advantages may be negated by critical mass requirements; non-sustainable advantage</p> <p>Costs in staying on top of ICT</p> <p>Specific skills required; reskilling required</p> <p>Small businesses have to carry more stock</p> <p>Resistance to payment for services offered via the web</p> <p>Unreliability and risk</p> <p>Loss of control through loss of relationships</p> <p>Disintermediation</p> <p>Measurement challenges: difficult to determine the audience reached, costs and benefits</p> <p>Long access and search times for information; traffic congestion</p> <p>Time and expense in setting up new processes for handling orders, dispatch and freight</p> <p>Difficulty in integrating existing databases and transaction-processing software designed for traditional commerce into the software that enables e-commerce</p> <p>Confusing and anarchic information environment</p>
<b>Market factor</b>	
<p>Company location becomes irrelevant</p> <p>Closer customer relationships with higher switching costs through structural bonds linking computer systems</p> <p>Widens existing markets to the global level</p> <p>Reaches/creates new markets virtual communities</p> <p>Buyers gain easy access more suppliers more often</p> <p>Suppliers can affordably reach more buyers</p> <p>Larger potential customer base</p> <p>Better customer service increasing customer value; contributes to societal gain</p> <p>Shifts advantage from seller to the buyer; buyers can quickly and thoroughly compare attributes of competing products</p> <p>Service information more accurately distributed; customers' problems solved faster</p> <p>Improved communication and increased feedback in real time. Information can reach more people without sacrificing content</p>	<p>Potential inability to accommodate global differences – may justify exclusion of information such as prices</p> <p>Disruption to existing relationships along the selling channel</p> <p>Risk from dealing with shoe-string businesses</p> <p>Sceptical buyers; risk from unknown customers</p> <p>Big companies band together to screw suppliers on prices</p> <p>Suppliers forced online (a benefit if compliance costs are reasonable)</p> <p>Restricts competition: big businesses deal only with suppliers that have e-procurement systems</p> <p>Shifts advantage from seller to the buyer</p> <p>Security problems</p> <p>Websites are dull; confusing and anarchic information environment</p> <p>Cultural and legal impediments</p>

Table 2. Contd.

<p>Enables narrowly targeted marketing efforts</p> <p>Alternate sales/delivery channels</p> <p>Number of products carried by suppliers independent of physical display area</p> <p>Creates new information-based products and enables prosumption</p> <p>Increases supply chain efficiency</p> <p><b>Competitive factor</b></p> <p>Business size becomes irrelevant</p> <p>Small businesses can compete on a more equal technological footing with multinationals; more opportunities for small businesses</p> <p>Big businesses may minimise inventory and increase cycle</p> <p>Reduced costs for big business (through accepting only suppliers that practice JIT delivery)</p> <p>Price convergence at a lower price level; viral marketing</p> <p>Nonprice competition stimulated</p> <p>Low cost distribution of information goods</p> <p>Online synergy effects from cross-selling lead to one-stop shop offerings and increase customer perceived value</p> <p>Faster launching of new or revised products</p> <p>Eliminates some national and global barriers to entry, such as marketing costs, distribution and shelf-space acquisition</p> <p>Competitive intelligence</p> <p>Virtual enterprises may mimic benefits of vertical integration</p>	<p>Unwieldy URLs</p> <p>Need bricks-and-mortar evidence</p> <p>Specific skills required</p> <p>Spells the end for small businesses</p> <p>Greater power for large businesses</p> <p>Risk from dealing with shoe-string businesses</p> <p>Bad for small business as big business can reduce costs by accepting only suppliers that practice JIT delivery</p> <p>Reduced competition</p> <p>Levelling of business practices</p> <p>Need to maintain a trust relationship with customers, providing constant value-added information, products and quality online experience</p> <p>Creates barriers to entry via IP, exclusivity arrangements and creation of customer communities</p> <p>Blurring of traditional boundaries</p>
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Source: Pires and Aisbett (2003).

Another important factor accounting for the success of Website development are security, privacy and trust (Udo, 2001; Ranganathan and Ganapathy, 2002; Wong and Law, 2005; Cases et al., 2010; Chen et al., 2010). Pires and Aisbett (2002) found that the overall of e-commerce activities have increasing impact on organisations' internally, market and competitive environments.

**METHODOLOGY**

**Questionnaire design**

Primary data were collected using a self-administered questionnaire designed to serve the purpose of the research objective. The first part of the questionnaire is related to organisation background and the second part of the questionnaire will be based on 5-points Likert scale: (1) unimportant, (2) of little importance, (3) moderately

important, (4) important, and (5) very important.

**Sampling**

To determine number of the sampling units, literature suggests that ten to fifteen of participants in the case of homogeneous group. The experience indicates that few new ideas are generated within a homogeneous group

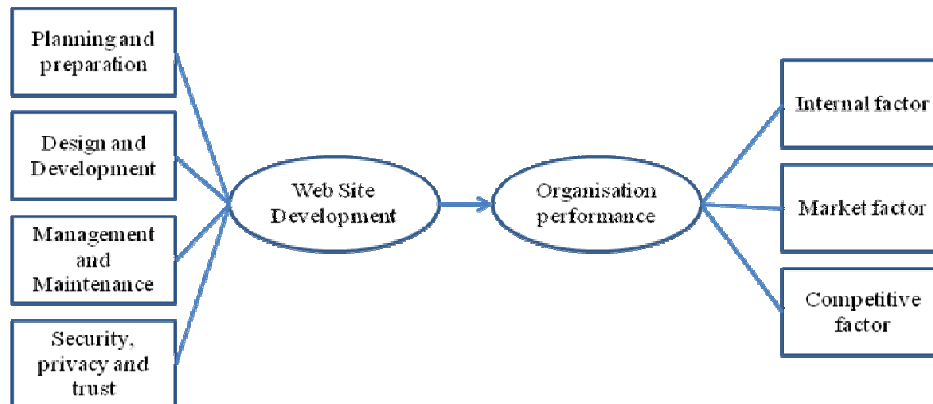


Figure 1. Research model.

Table 3. Category of industry.

Industry	Frequency	Percent
ICT	24	24
Manufacturing	29	29
Retailing	43	43
Construction and Real estate	1	1
Printing and Publishing	2	2
Banking and Finance	1	1
Total	100	100

once the size exceeds 30 well-chosen participants (Delbecq, Van de Ven and Gustafson, 1975; Birdir and Pearson, 2000). The size of the samples is also determined according to literature by Sekaran (2000). The size of samples would be 10 to 20 samples. Malhotra (1999) has suggested that the minimum sampling size for problem solving research is 200 samples. Based on these literatures, the suggestion of the size of the sampling unit is between 10 and 200. 372 questionnaires were distributed to the marketers. Only 100 questionnaires were returned. However, the number of questionnaires returned has achieved the minimum sampling size which is between 10 and 200.

#### Data collection

The questionnaires were mailed to the selected companies. The selections of the companies are from ICT, tourism and hospitality, manufacturing, retailing, construction and real estate, printing and publishing, banking and finance, and education industries. The industries selections are based on two criteria, the importance of the industry in the country based its income and it actively applies Website for business purposes. However, the returned questionnaires are mainly from ICT, manufacturing, retailing, construction and real estate, printing and publishing, and banking and finance. No questionnaire has been returned from tourism and hospitality, and education industries. For each industry, we have mailed 50 questionnaires, except banking and finance industry; only 22 questionnaires were distributed due to small size of the industry. Three months were required to wait for the questionnaires to be returned.

#### Analysis methods

The data were analysed using SPSS (Statistical Package for the Social Sciences). The analysed data were then synthesised and presented in a table. In the event of missing data or invalid answers, the questionnaire was considered void and not used in the analysis. SPSS was also used to analyse collected data based on the coefficient correlation. The coefficient of correlation describes the strength of the relationship between two sets of interval-scaled or ratio-scaled variables. It can assume any value of  $-1.00$  or  $+1.00$  inclusive. The coefficient correlation of  $-1.00$  or  $+1.00$  indicates perfect correlation (Mason, Lind and Marchal, 1999). The coefficient of correlation is used to determine whether there is positive relationship between Website development and organisation performance. AMOS also is used to analyse the regression weights and the fitness of model.

#### RESULTS

In this study, 100 questionnaires were returned. Majority of the samples are from retailing (43 samples), manufacturing (29 samples) and ICT industry (23 samples) in Malaysia; followed by printing and publishing (2 samples), construction and real estate (1 sample), and banking and finance (1 sample) (Table 3). Majority of the Websites were developed less than 10 years ago encountered only 10%. 37% of the Website were

**Table 4.** Number of year Website was developed.

Year	Frequency	Percent
< 1 Year	1	1
1 - 2 Years	11	11
3 - 4 Years	37	37
5 - 6 Years	24	24
7 - 8 Years	13	13
9 - 10 Years	4	4
> 10 Years	10	10
Total	100	100

developed 3 to 4 years ago, 24% of the Website were developed 5 to 6 years ago. The rest of Websites were developed at least 7 to 8 years (13%), 1 to 2 years (11%), 9 to 10 years (4%), and less than 1 year (1%) (Table 4). The mean score for all four factors of Website development is highly important. The highest mean score is security, privacy and trust (4.4633). This is followed by development and design (4.1340); planning and preparation (4.0293); and management and maintenance (3.6133). The mean score for all three factors of organisation performance are also important. They can be referred to as market factors (3.8850), internal factors (3.5340) and competitive factors (3.3983). The overall mean score of Website development and organisation performance are 4.0293 and 3.6058. The details of the mean score for each variable are shown in Table 5.

This study found that correlation between Website development and organisation performance is positive (0.305), which is between weak positive correlation and moderate positive correlation (0.25 to 0.50) and it is significant at 0.01 (Table 6). The correlation between four factors of Website development (planning and preparation; development and design; management and maintenance; and security, privacy and trust) are between moderately positive correlation (0.5) and strong positive correlation (0.75). For organisation performance factors, all factors are below strongly positive correlation. This can be referred to as the correlation between internal and market factor is between moderate positive correlation (0.5) and strong positive correlation (0.75), correlation between internal and competitive factor is no correlation (0.0) and weak positive correlation (0.25), and the correlation between market and competitive factor is a weak positive correlation (0.25) and moderate positive correlation (0.5). An overall of the study found that the correlations between Website development and organisation performance factors are below moderate positive correlation (Table 7).

At significant level of 0.05, the path coefficient in Table 8, as well as standardised and unstandardised estimates, as shown in Figure 2, found that Website development has a significant impact on organisation performance.

The study shows that the standardised estimate is 0.495, unstandardised estimate is 0.569, critical ratio is 3.835 and P-value is  $< 0.001$ . However, the study of Website development factors found that only planning and preparation; management and maintenance; and security, privacy and trust show that P value  $< 0.005$ , compared to development and design is P value  $> 0.005$ . Thus, these three factors are significantly impact on Website development. For organisation performance factors, only competitive factor have show that P value  $< 0.05$ , compared to Internal and market factors, which is P value  $> 0.05$ . Thus, only competitive factor has a significant impact on organisation performance. The chi-square value (CMIN) is 519.563, which is highly significant ( $p = < 0.000$ ). However, that this does not mean the model is good. In fact it is the opposite, from the point of view of statistical significance. We may say that the model is badness-of-fit (Table 9).

Goodness-of-fit are based on fitting the model to sample moments, which means to compare the observed covariance matrix to the one estimated on the assumption that the model being tested is true. These measures thus use the conventional discrepancy function. The chi-square value should not be significant if there is a good model fit, while a significant chi-square indicates lack of satisfactory model fit. That is, chi-square is a badness of fit measure in that a finding of significance means the given model's covariance structure is significantly different from the observed covariance matrix. If model chi-square is  $< 0.05$ , the model is rejected. Hoelter's critical N is the size the sample size must reach for the researcher to accept the model by chi-square, at the 0.05 or 0.01 level. This throws light on the chi-square fit index's sample size problem. Hoelter's N should be greater than 200 (Garson, 2006). Carmines and Mclver (1981) state that relative chi-square should be in the 2:1 or 3:1 range for an acceptable model. Kline (1998) said 3 or less is acceptable. Some researchers allow values as high as 5 to consider a model adequate fit, while others insist relative chi-square be 2 or less. Hoelter, at the 0.05 or 0.01 levels is 24 or 25, which is less than 200 as

**Table 5.** Descriptive statistics.

	Mean	Std. Deviation
<b>A: Website Development</b>	4.0293	0.50823
A1: Planning and Preparation	3.9067	0.54036
A1.1: Establish the need	4.1500	0.55732
A1.2: Gather information	4.0600	0.48866
A1.3: Prototype creation	3.5100	0.94810
A2: Development and Design	4.1340	0.55926
A2.1: Specification for business function	4.2500	0.60927
A2.2: Specification for target users	4.0400	0.68046
A2.3: Accuracy and consistency of Website	4.3400	0.62312
A2.4: Website structure and attractiveness	4.2400	0.63755
A2.5: Implementation: Validate of Website	3.8000	0.80403
A3: Management and Maintenance	3.6133	0.64913
A3.1: Continue competitive analysis	3.7100	0.71485
A3.2: Monitor changes in technology	3.4400	0.86830
A3.3: Frequency of Website updated	3.6900	0.88415
A4: Security, Privacy, and Trust	4.4633	0.61390
A4.1: Security on online activities (communication, transaction and distribution)	4.4900	0.64346
A4.2: Privacy on online activities	4.4800	0.64322
A4.3: Trust on online activities	4.4200	0.68431
<b>B: Organisation Performance</b>	3.6058	0.36341
B1: Internal Factor	3.5340	0.46454
B1.1: Leveraging of scarce organisation resources	3.2400	0.85422
B1.2: Increasing revenue and sales	3.2400	0.81798
B1.3: Better controlling over marketing activities (communication, transaction and distribution)	3.8400	0.46537
B1.4: More diverse business activities and economic of scope	3.5800	0.72725
B1.5: Enhancing customer relationship management	3.7700	0.72272
B2: Market Factor	3.8850	0.45146
B2.1: Widens existing markets to the global level	3.8100	0.89550
B2.2: Enabling narrowly targeted marketing efforts	3.6700	0.79207
B2.3: Can affordably reach more buyers	4.0700	0.49757
B2.4: Increasing value added services	3.9900	0.50242
B3: Competitive Factor	3.3983	0.54582
B3.1: Competing on a more equal technological footing with other organisation	3.5200	0.62732
B3.2: Minimising inventory	3.2200	0.85965
B3.3: Reducing costs through practicing Internet marketing	3.5400	0.65782
B3.4: Stimulating non-price competition	3.2800	0.91099
B3.5: Offering and increasing customer perceived value	3.7200	0.55195
B3.6: Eliminating some national and global barriers to entry	3.1100	1.15378

suggested by Garson (2006) and relative chisquare (CMIN/df) less than 5, which is 4.809. Thus, on the basis of the results obtained for Hoelter, at the 0.05 or 0.01 levels and relative chi-square, we would say that the model is adequate fit.

For Goodness of fit index (GFI) and adjusted goodness of fit index (AGFI), coefficients closer to unity indicate a good fit, with acceptable levels of fit being above 0.90 (Marsh, Balla and McDonald, 1988). AGFI can yield

meaningless negative values. AGFI > 1.0 is associated with just-identified models and models with almost perfect fit. AGFI < 0 is associated with models with extremely poor fit. The closer the RMR to 0 for a model being tested, the better the model fit (Garson, 2006). Garson (2006) also agree that for comparative fit index (CFI), incremental fit index (IFI) and Tucker-Lewis index (TLI), coefficients closer to unity indicate a good fit, with acceptable levels of fit being above 0.90. Normed fit



**Table 6.** Correlations.

		<b>Website development</b>	<b>Organisation performance</b>
Website development	Pearson Correlation	1	0.305**
	Sig. (2-tailed)		0.002 WPC→MPC
Organisation performance	Pearson Correlation	0.305**	1
	Sig. (2-tailed)	0.002 WPC↔MPC	

\*\* . Correlation is significant at the 0.01 level (2-tailed); WPC→ MPC: Weak Positive Correlation↔ Moderate Positive Correlation.

index (NFI), TLI, CFI and relative fit index (RFI) are varies from 0 to 1. NFI, TLI, CFI and RFI close to 1 indicate a very good fit. The fit indices of GFI and AGFI were 0.472 and 0.384, respectively, suggesting that this model not provides a good fit. NFI (0.368), RFI (0.313), IFI (0.424), TLI (0.365) and CFI (0.416) were less than 0.90, which is considered not a good-fit model. Parsimony measures are used in goodness-of-fit measures. The higher parsimony measure represents the better fit. For root mean square residual (RMR) and root mean square error of approximation (RMSEA), evidence of good fit is considered to be values less than 0.05; values from 0.05 to 0.10 are indication of moderately fit and values greater than 0.10 are taken to be evidence of a poorly fit model (Browne and Cudeck, 1993). The closer model is to the saturated model, the more PNFI and PCFI is penalised. There is no commonly agreed-upon cut-off value for an acceptable model (Garson, 2006). As shown in Table 9, the value of RMR (0.104) and the value of RMSEA (0.196), which is greater than 0.10. Thus, it is a poorly fit model. Finally, PNFI and PCFI were 0.539 and 0.694. The closer model is to the saturated model (< 0.001), the more PNFI and PCFI is penalised (Garson, 2006). The result shows that GFI (0.472), RMSEA (0.196), AGFI (0.384) and NFI (0.368), which does not achieve recommended values.

## DISCUSSION

### Theoretical

In the 1990s, many studies analysed the importance of adequate Website design, concentrating on aspects such as content, use and objectives (Hernández et al., 2009). Even, the literatures have found that number of researches has been done especially in Website development models, tasks and usability (Huizingh, 2000; Palmer, 2002; Robbins and Stylianou, 2003; Moustakis et al., 2006; Moustakis et al., 2006; Boshoff, 2007; Zhao and Dholakia, 2009; Zeng et al., 2009; and Chen et al., 2010). Number of studies (Udo, 2001; Ranganathan and

Ganapathy, 2002; Wong and Law, 2005; Cases et al., 2010; and Chen et al., 2010) have focused on security, privacy and trust. Even, Cunliffe (2000) presented an informal development model synthesised from a review of development case studies and published Web research literature. This model identifies the main stages and tasks of development. However, Nour and Fadlalla (2000) highlighted that such research provides a general description of the importance of the Website but does not identify which factors, must always be present and which improve organisation strategy.

Theoretically, conceptual linkages of the impact of Website development on organisation performance were established and empirically tested. Pires and Aisbett (2003) focuses on internal, market and competitive factors. These three factors of impact, respectively, affecting internal, market and competitor analyses, serve to justify why marketing and organisational strategies must be adjusted interdependently with e-commerce adoption strategies. Internal factor focuses more to the aspects of production capacity, costs, operations and sales, revenue and profit objectives. The impact of Website development on organisation performance is similarly ambiguous for market factors such as definition of markets, relationships, customer service, customer value, delivery channels and new products. Pires and Aisbett (2003) also suggests that the impact on competitive factor related to competition, cost deduction, stimulating non-price competition and customer perceived value. Hernández et al. (2009) specified the key factors of commercial Website design, unifying the main analysis criteria that have been used. First, that the research on web quality is very fragmented. Second, most of studies only formulate an index and/or a theoretical model, without empirically testing them on any Website. Third, most of the existing literature is undertaken in a general context, without differentiating between the types of firm or sector analysed, and does not take into account that the factors considered may not be applicable in all cases. Thus, the contribution of this study focuses on the specialised literature and empirical evidences about the main factors of Website

Table 7. Correlations.

Correlation	A1	A2	A3	A4	B1	B2	B3
A1 Pearson correlation	1	0.664**	0.709**	0.555**	0.278**	0.083	0.240*
A1 Sig. (2-tailed)		0.000	0.000	0.000	0.005	0.410	0.016
		MPC↔SPC	MPC↔SPC	MPC↔SPC	WPC↔MPC	NC↔WPC	NC↔WPC
A2 Pearson Correlation	0.664**	1	0.712**	0.698**	0.321**	0.372**	0.113
A2 Sig. (2-tailed)	0.000		0.000	0.000	0.001	0.000	0.261
	MPC↔SPC		MPC↔SPC	MPC↔SPC	WPC↔MPC	WPC↔MPC	NC↔WPC
A3 Pearson correlation	0.709**	0.712**	1	0.586**	0.080	0.171	0.203*
A3 Sig. (2-tailed)	0.000	0.000		0.000	0.430	0.088	0.043
	MPC↔SPC	MPC↔SPC		MPC↔SPC	NC↔WPC	NC↔WPC	NC↔WPC
A4 Pearson correlation	0.555**	0.698**	0.586**	1	0.255*	0.258**	0.040
A4 Sig. (2-tailed)	0.000	0.000	0.000		0.011	0.010	0.694
	MPC↔SPC	MPC↔SPC	MPC↔SPC		WPC↔MPC	WPC↔MPC	NC↔WPC
B1 Pearson correlation	0.278**	0.321**	0.080	0.255*	1	0.556**	0.187
B1 Sig. (2-tailed)	0.005	0.001	0.430	0.011		0.000	0.062
	WPC↔MPC	WPC↔MPC	NC↔WPC	WPC↔MPC		MPC↔SPC	NC↔WPC
B2 Pearson correlation	0.083	0.372**	0.171	0.258**	0.556**	1	0.290**
B2 Sig. (2-tailed)	0.410	0.000	0.088	0.010	0.000		0.003
	NC↔WPC	WPC↔MPC	NC↔WPC	WPC↔MPC	MPC↔SPC		WPC↔MPC
B3 Pearson correlation	0.240*	0.113	0.203*	0.040	0.187	0.290**	1
B3 Sig. (2-tailed)	0.016	0.261	0.043	0.694	0.062	0.003	
	NC↔WPC	NC↔WPC	NC↔WPC	NC↔WPC	NC↔WPC	WPC↔MPC	

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed); NC↔ WPC: No Correlation↔Weak Positive Correlation; WPC↔ MPC: Weak Positive Correlation↔ Moderate Positive Correlation; MPC↔ SPC: Moderate Positive Correlation↔ Strong Positive Correlation; SPC↔ PPC: Strong Positive Correlation↔ Perfect Positive Correlation.

development which impact organisation performance.

## MANAGERIAL IMPLEMENTATION

The importance of web atmospherics has been revealed to attract users' attention to the Website. Therefore, the role played by Web design is crucial for getting Website's success. The development of a quality Website, as part of e-business strategy, has become a key element for success in the online market. Focusing on Website development per se is not very useful if it does not lead to managerially desirable outcomes. This research, therefore, focused on the relationship between Website development and organisation performance. This research has shown that Website development has an impact on organisation performance. Marketer or Website developer should not leave any aspect of Website development stages, but with equal weightage. Most

literatures related to Website development have focused on three main factors, which are planning and preparation; design and development; and management and maintenance. Besides, marketer or Website developer should stress the importance of the security, privacy and trust. The mean score for all factors are greater than 3.0, and it must be considered in every time and place of the Website. This study has proved that beside that the first three factors of Website development factors are important, security, privacy and trust has shown a positive impact on Website development. The organisation engaged in e-commerce that has developed specific strategy for their use of Website, cognisant of its potential impact on organisation performance, in terms of internal, market and competitive factors. This study provides evidence there is a positive correlation between Website development and organisation performance. We have identified four groups of correlation even between Website development and organisation performance factors:

**Table 8.** Regression weights.

			Estimate	S.E.	C.R.	P
PERFORMANCE	←	WEBSITE	0.569	0.148	3.835	***
A1	←	WEBSITE	1.453	0.441	3.294	***
A2	←	WEBSITE	6.126	8.384	.731	.465
A3	←	WEBSITE	1.163	0.240	4.840	***
A4	←	WEBSITE	1.393	0.238	5.858	***
B1	←	PERFORMANCE	2.442	1.983	1.231	.218
B2	←	PERFORMANCE	2.058	1.293	1.592	.111
B3	←	PERFORMANCE	0.483	0.155	3.124	0.002
A1.1	←	A1	0.246	0.068	3.615	***
A1.2	←	A1	0.182	0.053	3.468	***
A1.3	←	A1	0.366	0.072	5.071	***
A2.1	←	A2	0.079	0.105	0.750	0.453
A2.2	←	A2	0.073	0.098	0.744	0.457
A2.3	←	A2	0.088	0.117	0.748	0.454
A2.4	←	A2	0.076	0.101	0.745	0.456
A2.5	←	A2	0.103	0.137	0.751	0.453
A3.1	←	A3	0.412	0.061	6.796	***
A3.2	←	A3	0.451	0.065	6.981	***
A3.3	←	A3	0.250	0.060	4.154	***
A4.1	←	A4	0.353	0.039	8.958	***
A4.2	←	A4	0.352	0.040	8.834	***
A4.3	←	A4	0.325	0.042	7.776	***
B1.1	←	B1	0.144	0.106	1.356	0.175
B1.2	←	B1	0.102	0.080	1.279	0.201
B1.3	←	B1	0.047	0.040	1.171	0.241
B1.4	←	B1	0.082	0.069	1.188	0.235
B1.5	←	B1	0.190	0.141	1.342	0.180
B2.1	←	B2	0.226	0.120	1.880	0.060
B2.2	←	B2	0.060	0.044	1.353	0.176
B2.3	←	B2	0.171	0.095	1.789	0.074
B2.4	←	B2	0.111	0.060	1.853	0.064
B3.1	←	B3	0.206	0.096	2.153	0.031
B3.2	←	B3	0.201	0.114	1.772	0.076
B3.3	←	B3	0.354	0.096	3.679	***
B3.4	←	B3	0.387	0.111	3.479	***
B3.5	←	B3	0.387	0.076	5.100	***
B3.6	←	B3	0.234	0.136	1.729	0.084

no correlation and weakly positive correlation, weakly positive correlation and moderately positive correlation, moderately positive correlation and strongly positive correlation, and strongly positive correlation and perfectly positive correlation.

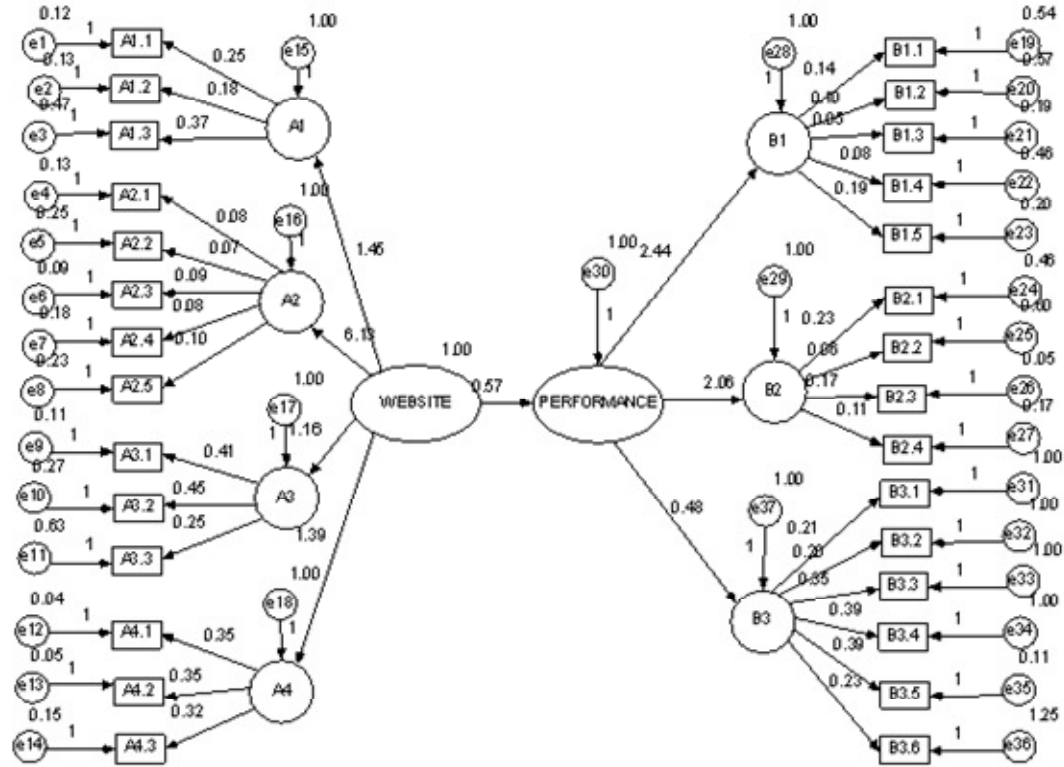
Even this study proved that research framework may not be a good-fit; however, an overall of the study shows that all factors of Website development and organisation performance are highly important. This study also proved that there is a positive correlation between Website development and organisation performance. Finally, there is

an impact of the Website development on organisation performance.

### Conclusion

Even the analysis of an overall model is considered not a good-fit; however, this study found that Website development has a significant impact on organisation performance. Another important finding is there is a positive correlation between Website development and

Unstandardised



Standardised

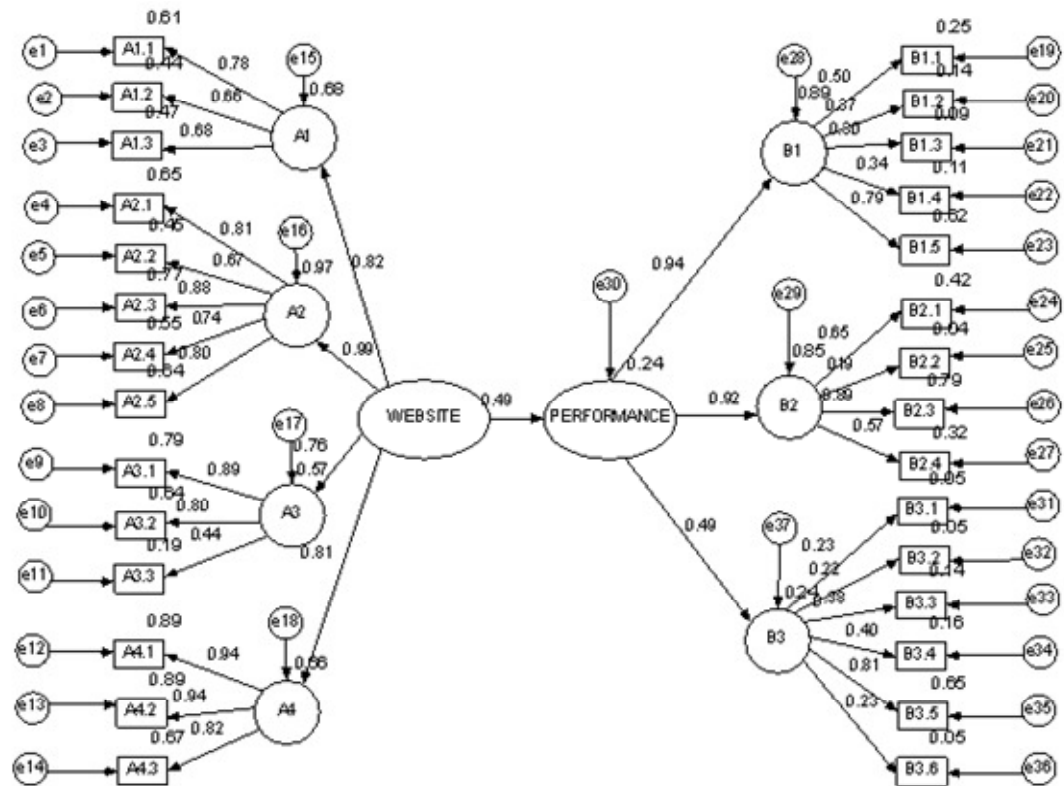


Figure 2. Path model.

**Table 9.** Testing of model fit.

<b>Fit measure</b>	<b>Default model</b>	<b>Saturated model</b>	<b>Independence model</b>	<b>Macro</b>
Discrepancy	1793.817	0.000	2840.548	CMIN
Degree of freedom	373	0	406	DF
P = Value	<0.001		<0.001	P
Number of parameters	62	435	29	NPAR
Discrepancy/df	4.809		6.996	CMIN/DF
Root mean square residual	0.104	0.000	0.161	RMR
Goodness of fit index	0.472	1.000	0.255	GFI
Adjusted goodness of fit index	0.384		0.202	AGFI
Parsimony goodness of fit index	0.404		0.238	PGFI
Normed fit Index	0.368	1.000	0.000	NFI
Relative fit index	0.313		0.000	RFI
Incremental fit index	0.424	1.000	0.000	IFI
Tucker-Lewis index	0.365		0.000	TLI
Competitive fit index	0.416	1.000	0.000	CFI
Parsimony ratio	0.919	0.000	1.000	PRATIO
Parsimony adjustment to the normed fit index	0.339	0.000	0.000	PNFI
Parsimony adjustment to the competitive fit index	0.383	0.000	0.000	PCFI
Noncentrality parameter	1420.817	0.000	2434.548	NCP
Lower boundary of a two-sided 90% confidence interval for the population NCP	1292.630	0.000	2269.246	LO 90
Upper boundary of a two-sided 90% confidence interval for the population NCP	1556.493	0.000	2607.256	HI 90
Minimum discrepancy function F	18.119	.000	28.692	FMIN
Estimated population discrepancy	14.352	0.000	24.591	F0
Lower boundary of a two-sided 90% confidence interval for the population F0	13.057	0.000	22.922	LO 90
Upper boundary of a two-sided 90% confidence interval for the population F0	15.722	0.000	26.336	HI 90
Root mean square error of approximation	0.196		0.246	RMSEA
Lower boundary of a two-sided 90% confidence interval for the population RMSEA	0.187		0.238	LO 90
Upper boundary of a two-sided 90% confidence interval for the population RMSEA	0.205		0.255	HI 90
P for test of close fit	0.000		0.000	PCLOSE
Akaike information criterion	1917.817	870.000	2898.548	AIC
Browne-Cudeck Criterion	1971.730	1248.261	2923.765	BCC
Bayes Information Criterion	2079.338	2003.249	2974.098	BIC
Consistent AIC	2141.338	2438.249	3003.098	CAIC
Expected cross validation index	19.372	8.788	29.278	ECVI

Table 9. Contd.

Lower boundary of a two-sided 90% confidence interval for the population ECVI	18.077	8.788	27.609	LO 90
Upper boundary of a two-sided 90% confidence interval for the population ECVI	20.742	8.788	31.023	HI 90
MECVI	19.916	12.609	29.533	MECVI
Hoelter .05	24		16	Hoelter .05
Hoelter .01	25		17	Hoelter .01

organisation performance.

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