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**CYBERSQUATTING IN SINGAPORE'S DOMAIN NAME REGIME AND DISPUTE
RESOLUTION FRAMEWORK: A QUANTITATIVE ANALYSIS**

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CYBERSQUATTING IN SINGAPORE’S DOMAIN NAME REGIME AND DISPUTE RESOLUTION FRAMEWORK: A QUANTITATIVE ANALYSIS

It has been 16 years since the adoption of the Singapore Domain Name Dispute Policy (SDRP) as an integral part of our local Domain Name Regime. Amidst the multitude of criticisms against the Uniform Domain Name Dispute Resolution Policy internationally, by which our SDRP is modelled after, it is an opportune moment to re-examine our local regulatory framework as to its effectiveness and whether it achieves the intended balance sought to be struck between public and private interests. This paper examines and evaluates the regulatory framework surrounding Singapore’s Domain Name Regime and the Singapore Domain Name Dispute Policy as a curative mechanism to tackle the problem of cybersquatting through the use of available statistics and a quantitative analysis of decisions rendered under the local dispute resolution framework.

I. INTRODUCTION

On November 6, 2001, the Singapore Network Information Centre (SGNIC), Singapore’s domain name registration authority, had adopted the Singapore Domain Name Dispute Policy (SDRP), as part of its efforts to strengthen the Singapore’s regulatory framework over the registration and use of “.sg” country code Top-Level Domain (ccTLD). The SDRP, modelled after the Uniform Domain Name Dispute Resolution Policy (UDRP), serves as an alternative dispute resolution (ADR) framework for resolving domain names disputes targeted at cybersquatting cases and forms part of the international development in global efforts to tackle cybersquatting through the use of the UDRP. While the UDRP has been successful in addressing the problem of cybersquatting, it has similarly attracted criticisms by academics on its systemic bias and potential for abuse by trademark owners.

As we approach the 16 years’ mark in the adoption of the SDRP, it is an opportune moment to examine and evaluate the Singapore’s domain name regime and the SDRP as an integral part of our national ccTLD regulatory framework in its effectiveness towards tackling the problem

of cybersquatting and whether in so doing, it manages to achieve the intended balance between public and private interests. This paper, therefore, seeks to build on existing literature to examine and evaluate our local domain name regime and the SDRP framework through the use of available statistics and a quantitative analysis of every SDRP decision till date.

This paper will show that although Singapore has adopted an *ex-post* domain registration system, the successful implementation of the SDRP as a form of curative mechanism has enabled Singapore's regulatory framework to strike a proper balance between the promotion of competition and growth against the need to protect private consumers' and business' interests. However, statistics have also highlighted potential problems where the regime seems to be tilting in favour of trademark owners, and this serves as an impetus for some modifications to be made to the local domain name regime.

This paper will firstly provide a background to domain name regimes and the role of the dispute resolution framework, highlighting some potential issues and underlying tensions. Secondly, the empirical research methodology will be described, providing an account of the challenges, limitations and assumptions built into the present study. Thirdly, this paper will seek to provide an analysis of Singapore's domain name regime and the SDRP, using comparative empirical data between Singapore and other jurisdictions where available, descriptive statistics as indicators for evaluation and linear regression models to aid in providing a quantitative analysis of any possible systemic bias or potential for abuse within the SDRP itself.

II. DOMAIN NAME REGISTRATION SYSTEMS AND THE ROLE OF THE DISPUTE RESOLUTION FRAMEWORK

A. DOMAIN NAMES AND THE PROBLEM OF CYBERSQUATTING

Domain names are unique textual addresses assigned to IP addresses to provide recognisable and memorable names as opposed to numeric sequences. They are created in 1984 as part of the Domain Name System (DNS).¹ The DNS is structured in a hierarchical manner, therefore,

¹ Torsten Bettinger & Allegra Waddell, eds, *Domain Name Law and Practice: An International Handbook*, 2nd Ed ed (Oxford University Press, 2016) at 4–5.

allowing for the decentralisation and delegation of the responsibility for the administration of the Internet naming and address functions to different entities.²

Domain names have since, however, evolved from mere technical tools to become integral commercial vehicles for businesses given that they simultaneously serve as an identifier for the company thus ensuring that customers may find the company's website easily. However, it ought to be noted at the outset that while the legal nature of domain names is still uncertain, domain names is not merely another category of intellectual property although they may have related interests given that domain names may act as an identifier as well.³

An unfortunate phenomenon stemming from the increasing commercialization of domain names is the creation of the possibility for opportunists to profit from the business goodwill in the real-world identifiers such as trademarks through the registration of these identifiers as domain names. This is usually possible because most registration systems do not require any association with an identifier before registration is allowed and these registrations usually operate on a "First-come, first-served" basis. Alternatively, the registrant may also attempt to register variants of these identifiers, a practice known as "typosquatting". While the definition of cybersquatting has been widely debated, for the purposes of this paper, cybersquatting shall encompass opportunistic practices by the registrant where i) the Registrant may attempt to demand payment from the identifiers' owners in return for the transfer of the domain name; ii) the Registrants attempt to harass or injure the identifiers' owners' businesses, or even as a means by competitors to engage in unfair trading; or iii) the use by the Registrant in taking advantage of famous identifiers to profit from typosquatting using pay-per-click websites.⁴

B. DOMAIN NAMES REGISTRATION SYSTEM

Globally, the Internet Corporation for Assigned Names and Numbers (ICANN), a non-profit private sector organisation created in 1998 under the auspice of the Clinton Administration, is

² David Linsay, *International Domain Name Law: ICANN and the UDRP* (Hart Publishing, 2008) at 8.

³ Jenny Ng, *The Domain Name Registration System: Liberalization, consumer protection and growth* (Routledge, 2013) at 13. Warren B Chik, "Lord of Your Domain, But Master of None: The Need to Harmonize and Recalibrate the Domain Name Regime of Ownership and Control" (2008) 16 *International Journal of Law and Information Technology* 8 at 36.

⁴ David Linsay, *supra* note 2 at 95–9.

responsible for the domain administrations internationally.⁵ However, the administration of ccTLDs is usually delegated to entities under the respective national governments because of their direct interest in the management of this system.⁶

In the formulation of every national domain name regime, there is a consideration of the balance to strike between conflicting public and private interests, such as the need to promotion competition and growth in the domain name industry as opposed to the need to protect the interests of consumers and legitimate rights owners, as shaped by the respective national policies and priorities.⁷

By and large, national registration systems may be largely classified as either restrictive (*ex-ante*) or unrestrictive (*ex-post*), each reflecting each system's degree of employment of both preventive and curative mechanisms to tackle to problem of cyber-squatting. Under the restrictive system such as Australia's, the focus is on the preventive mechanism where the registrant's entitlement to the domain name is determined by eligibility and allocation (i.e. an examination of applications and verification of entitlement of registrants as part of the domain name registration process). In contrast, unrestrictive systems such as the UK's instead focuses on the usage of curative mechanism and does not examine Registrants' eligibility before registration but instead seeks to rely on the arbitration process for domain name disputes to tackle cyber-squatters.⁸

C. DISPUTE RESOLUTION FRAMEWORK

Given the unique nature of domain names, domain name disputes are a necessary by-product of the increased usage and commercialization of Internet by the global population where there are two or more parties interested in using the same domain name. Although traditional intellectual property law may be extended to govern these disputes, the multitude of limitations in such an approach, ranging from prohibitive costs and length of litigation, jurisdictional

⁵ Torsten Bettinger & Allegra Waddell, *supra* note 1 at 12.

⁶ Jenny Ng, *supra* note 3 at 13.

⁷ *Ibid* at 62.

⁸ *Ibid* at 17 and 70.

issues and the limited scope of trademark infringement to cover cybersquatting, sparked the need for an ADR system to tackle the problem of cybersquatting.⁹

Hence, in the same recommendations from which ICANN was formed followed by a consultative process by the World Intellectual Property Organisation (WIPO), an ADR specific for domain name disputes was mooted and the UDRP was subsequently approved by ICANN in October 1999 as an international dispute resolution procedure allowing trademark holders to seek arbitration over the control of domain names.¹⁰

As a curative mechanism, the UDRP has three key objectives¹¹:

- i) To create globally uniform rules for resolving trademark-domain name disputes;
- ii) To create an inexpensive, quick, just and lightweight procedure to resolve such disputes;
- iii) To only tackle cybersquatting cases.

However, the UDRP as a curative mechanism to ICANN's unrestrictive domain registration system ultimately represents a policy trade-off. While it has been hailed as a successful curative mechanism to tackle the problem of cybersquatting, there was a similar increase in "reverse domain name hijacking", defined as the usage of the UDRP in bad faith to attempt to deprive the Registrant of a domain name, hence undermining the legitimacy and effectiveness of the UDRP as a curative mechanism. Critics of the UDRP has attributed these limitations, *inter alia*, to the apparent systemic bias in the system towards trademark holders and the inconsistency of the decisions.¹²

III. THE METHODOLOGY

While there have been multiple commissioned empirical studies done on gTLD and other national ccTLD decisions evaluating their respective domain name registration systems, there

⁹ Phang Hsiao Chung, "Resolving Domain Name Disputes - A Singapore Perspective" (2002) 14 SAcLJ 85 at 94–108.

¹⁰ David Lindsay, *supra* note 2 at 99–109.

¹¹ Peter Chan, "The Uniform Domain Name Dispute Resolution Police as an Alternative to Litigation" (2002) 9 MurEUJL 12 at 12.

¹² Dr Milton Mueller, "Rough Justice: An Analysis of ICANN's Uniform Dispute Resolution Policy" at 5.

has been no such prior empirical study performed on our local regulatory framework and SDRP decisions seeking to evaluate our local domain name registration system.

The present study is, therefore, built on previous qualitative analysis and empirical studies surrounding the international domain names registration framework and the major ccTLDs' registration systems (i.e. Australia and the UK). The relevant statistics from other jurisdictions will also be drawn upon for comparative analysis where appropriate. This study also builds upon the qualitative analysis from four commentaries on the local domain name registration system and seeks to provide a quantitative context to these analyses where appropriate.

A. QUANTITATIVE METRICS

An initial challenge of this empirical study is the need for quantitative metrics by which this paper may evaluate the Singapore domain name regime against. Without such metrics, any quantitative data obtained will not be relevant in assessing and achieving our research objective.

While such quantitative metrics are not immediately apparent, various international reports have been using various metrics to assist them in coming to their respective conclusions for which this study shall similarly adopt. Hence, this paper shall evaluate Singapore's domain name regime using metrics such as i) the growth rate of domain names and ii) various trends in relation to cybersquatting. In evaluating the effectiveness SDRP framework, a quantitative analysis built on linear regression models based on data from SDRP decisions is employed to examine if the limitations in the UDRP similarly apply to our implementation of the SDRP.

B. SINGAPORE DOMAIN NAME REGISTRATION STATISTICS AND SDRP CASES

For this study, the two main sources of data are the “.sg” ccTLD domain name registration statistic, obtained from SGNIC, and the SDRP cases themselves. For SDRP cases, there is currently a total of 42 complaints till date on the Singapore’s Mediation Centre (SMC) portal.

However, out of the 42 complaints, there are 9 complaints with no grounds of decisions given that they were either settled or withdrawn by the Complainants. Additionally, there is one particular written decision *Fujifilm v Huang Qingyin* (SDRP-2012/0004(F)) classified as a case in favour of the Complainant by the SMC, even though it was a decision rendered pursuant to a settlement agreement rather than the merits of the case. Hence, this case would be more appropriately taken as a case where there was a settlement. These 10 complaints, therefore, have limited utility and will not be taken into consideration in the evaluation of the SDRP framework, but will nevertheless feature in our assessment of the domain name regime. Henceforth, a total of 32 SDRP decisions will be considered in our analysis of the SDRP framework.

In brief, the examination of the SDRP cases may be divided into three distinct steps. The study starts off with a review of the SDRP itself, identifying the key elements and findings that the panellists will be expected to discuss and decide upon in their written decisions. The three SDRP elements will also act as both independent variables for the finding of conclusion and as dependent variables where we attempt to analyse the sub-elements and the dummy variables against the respective elements. These include:

Attributes	Description
Conclusion	The key dependent variable in this study indicating the Panelist's decision, for or against the Complainant. It is a qualitative, binary dependent attribute by which the predictors below seek to measure
Identical / Confusingly Similar to Mark	Whether the Registrant's domain name is identical or confusingly similar to a name, trademark or service mark in which the Complainant has rights;
Registrant has no legitimate interests in domain name	Whether the Complainant has shown the Registrant has no rights or legitimate interests in respect of the domain name;
Evidence of Bad Faith	Whether the Complainant has shown that the Registrant's domain name has been registered or is being used in bad faith.

Table 1: Dependent Variables and Key Elements for Analysis

Secondly, in addition to identifying the key elements as part of our study, we added additional predictors, expressly listed in the SDRP or not, which the Panellist may or may not consider in reaching the respective finding of each element. These include:

Element	Attributes	Description
Identical/Confusing Similar to Mark	Existence of Trademark	Whether the Complainant has rights over a registered trademark.
	Trademark registered in Singapore	Whether the Trademark is registered in Singapore.
	Trademark registered in other Countries	Whether the Trademark is registered in other countries.
	Length of Trademark registered in Singapore	What is the Length of the Period where the Trademark has been registered in Singapore.
	Well-Known Mark	Whether the said mark qualifies the legal definition of a well-known mark.
	Foreign Brand	Whether the complainant's right constitute a foreign brand.
	Well-Known Foreign Brand	Whether the Complainant's right constitute a foreign brand.
	Goodwill	Whether the Complainant's business was found to have goodwill
	Sales	What is the quantitative value of sales adduced as evidence?
	Advertising	What is the quantitative value of advertising costs adduced as evidence?
	Made Up Word	Whether the word of the domain name is a made-up word not belonging to a particular language.
	English Word	Whether the word of the domain name is an English word
	Length of Word	Number of Characters in Domain name
	Domain a Variation of Mark or Brand	Whether the domain name is a variation or permutation of the Complainant's mark
	Identical Words	Whether the domain name and mark's words are identical.
	Similar Words	Whether the domain name and mark's words are similar.
	Percentage Similarity of Words	What is the quantitative value of the percentage of similarity between domain name and mark as calculated by number of similar characters over total characters?
	Similarity of Pronunciation / Aural Similarity	Whether the domain name and the mark has aural similarity.

Table 2: Additional Attributes for Element One

Element	Attributes	Description
Registrant has no legitimate interests in domain name	Respondent showed Bona Fide usage	Whether the respondent has showed usage of domain name or demonstrable preparations to use domain name in connection with a bona fide offering of goods or services.
	Respondent showed they were commonly known by a market or sector of the public	Whether the respondent has showed that they were commonly known by a market or sector by that name (i.e. domain name)
	Respondent showed they had used the domain name fairly	Whether the respondent has showed that they are making a legitimate non-commercial or fair use of the domain name, without intent for commercial gain to misleadingly divert consumers or to tarnish the trademark or service mark at issue.
	Respondent's usage of domain	A categorical variable describing the Respondent's usage of domain (i.e. whether the domain name was blank, used for sale/rent/advertisements, redirect to other websites, legitimate usage of domain name)
	Length of Usage	A quantitative variable of how long has the Respondent's usage of the domain name been.
	Complainant Prior Ownership	Whether the complainant had prior ownership of the domain name prior to the respondent.

Table 3: Additional Attributes for Element Two

Element	Attributes	Description
Evidence of Bad Faith	Evidence of Circumstances of Registration for Valuable Consideration	Whether there are circumstances indicating that the Registrant has registered or acquired the domain name primarily for the purpose of selling, renting, or otherwise transferring the domain name registration to the Complainant, who bears the name or is the owner of the trademark or service mark, or to a competitor of that Complainant, for valuable consideration in excess of the Registrant's documented out-of-pocket costs directly related to the domain name.
	Evidence of Registration to Prevent Trademark Owner Usage	Whether there is evidence that the Registrant has registered the domain name in order to prevent the owner of the trademark or service mark from reflecting the mark in a corresponding domain name, provided that the Registrant has engaged in a pattern of such conduct.
	Evidence of Registration to Disrupt Business of Trademark Proprietor	Whether there is evidence that the Registrant has registered the domain name primarily for the purpose of disrupting the business of a competitor.
	Evidence of Attracting Customers for Commercial Gain Through Likelihood of Confusion	Whether there is evidence that by using the domain name, the Registrant has intentionally attempted to attract, for commercial gain, Internet users to the Registrant's website or other on-line location, by creating a likelihood of confusion with the Complainant's name or mark as to the source, sponsorship,

		affiliation, or endorsement of the Registrant's website or location or of a product or service on the Registrant's website or location.
	Evidence of Bad Faith on Other Grounds	Whether the Panelist came to the conclusion that there was bad faith on other grounds not stipulated in the SDRP.
	Did Respondent respond	Whether the Respondent responded to the complainant and made submissions accordingly.
	Prior commercial relationship between parties	Whether there was any prior commercial relationship between the Complainant and the Respondent.

Table 4: Additional Attributes for Element Three

Thirdly, general predictors, with no relation to the elements of the SDRP, were also added to examine if there are any trends which may indicate some form of systemic bias in the implementation of the SDRP. These include:

General Attributes	
Length of Case	Year of Judgment
Country of Respondent	Country of Complainant
Industry of the Complainant	Industry of the Respondent
Panelist	Panelist Profession
Attempted to Settle	Number of Attempts to Settle
Attempted to Mediate	Number of Actual Mediations

Table 5: List of General Predictors/Attributes outside the scope of the elements of the SDRP

C. ASSUMPTIONS, CHALLENGES AND LIMITATIONS

1. *Small Datasets*

A major limitation of this study stems from the fact that the dataset only consists of 32 SDRP decisions, a relatively small number for a quantitative analysis. This small dataset has therefore created limitations in the ability to create and use accurate logistic regression models for analysis purposes given that these models work best when there is a larger amount of data. Hence, logistic regression models are not included for consideration.

2. *Dummy Variables*

The inclusion of dummy variables has proved to be a challenge in the research process. This is primarily because of the difficulty in the extraction of relevant data because they will often not be found in the decisions themselves. Hence, these variables are not significantly helpful in our analysis because they usually return the same results for all 32 decisions or cannot be found. Nevertheless, this is not surprising since these dummy variables do not form part of the SDRP to begin with, and are not expected to be discussed by the Panelists unless otherwise raised by the parties.

Further, certain dummy variables such as identification as to whether the identifier in issue is a well-known foreign brand require a lot of subjectivity on our part. Without any proper objective basis, conclusions drawn from it may have limited utility. This stands in contrast to other variables such as whether the Complainant's mark is registered in foreign jurisdictions which may be decided on objective grounds.

3. *Linear Regression Models*

The majority of the analysis on the SDRP framework is built on linear regression models which carry with them several assumptions which must be kept in mind. Firstly, these models hold the key assumption that the relationships are linear with no or little multicollinearity. Hence, caution ought to be exercised in the present study where many of the variables are co-dependent on each other, and therefore any model derived as such has limited utility. Secondly, these models assume that there is homoscedasticity based on the ordinary least squares method and fail to account for any outliers, if any.

IV. THE SINGAPORE PERSPECTIVE

A. SINGAPORE'S *EX POST* REGISTRATION SYSTEM AND CYBERSQUATTING

In Singapore, the administration of the “.sg” ccTLD is done by SGNIC. Under our domain name regime, we have adopted the *ex-post* registration system, albeit with preventive mechanisms employed for new releases of special categories of domain names (i.e. single character or numeric). Like the UK, there is no examination of the Registrants' eligibility before registration, although the applicant must be a “Singaporean” to qualify for registration and various domain names are prohibited for reasons related to public policy. Instead of an *ex-ante* examination of the Registrant's eligibility to the domain name, the Registrants, bound by a Registrant Agreement with SGNIC upon the approval of registration, are required to provide various warranties that *inter alia*, i) the domain name does not infringe on others' trademark rights subsisting in Singapore, ii) the domain name is intended to be used, iii) usage of the domain name is lawful and for own benefit.¹³

¹³ Torsten Bettinger & Allegra Waddell, *supra* note 1 at 813–814.

The usage of preventive mechanisms includes the sunrise mechanism for new releases of special categories of domain names where trademark owners can pre-apply for the new domain names to claim priority over the sunrise period. Additionally, where there are multiple applications for the same domain names in these categories, an auctioning system is put in place. Further, with effect from June 2016, the IPOS-SGNIC domain reservation programme is also put in place to allow applicants who have completed IP applications on the IPOS IP2SG to have a reserved “.sg” name provided it is available thus preventing abusive registrations.

Given that Singapore adopts an *ex-post* registration system, we will expect a higher rate of domain registration growth as a result of greater competitiveness but in the same vein, higher cybersquatting activity as well.

1. Number of “.sg” Domain Name Registrations

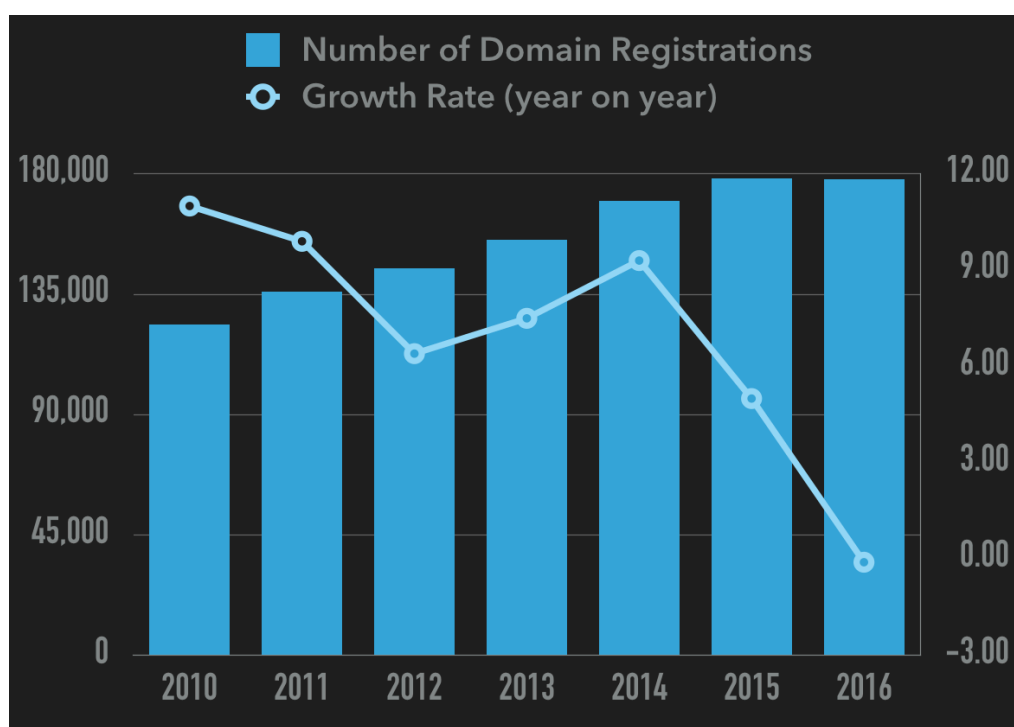


Figure 1: “.sg” ccTLD Domain Name Registration Statistics Between Dec 2010 to Dec 2016

As indicated in Figure 1, our domain names industry has constantly been experiencing growth, peaking at Dec 2015, an observation coherent with our expectation. In spite of the small dip in the total number of registrations in Dec 2016, this is a clear indication of a healthy domain

name industry with sufficient competition amongst businesses. On the assumption that there have been no changes made in the derivation of the statistics by SGNIC, a possible explanation for the dip in 2016 may be the direct effect of the employment of the preventive mechanism as adopted by SGNIC in 2016 (i.e. the IPOS-SGNIC domain name reservation programme). While a clear inference is that this constant growth in number of domain name registrations may be attributed to the competitive registration system we adopted, it is also caveated that other reasons such as economic growth may similarly account for the said growth.

2. Cybersquatting

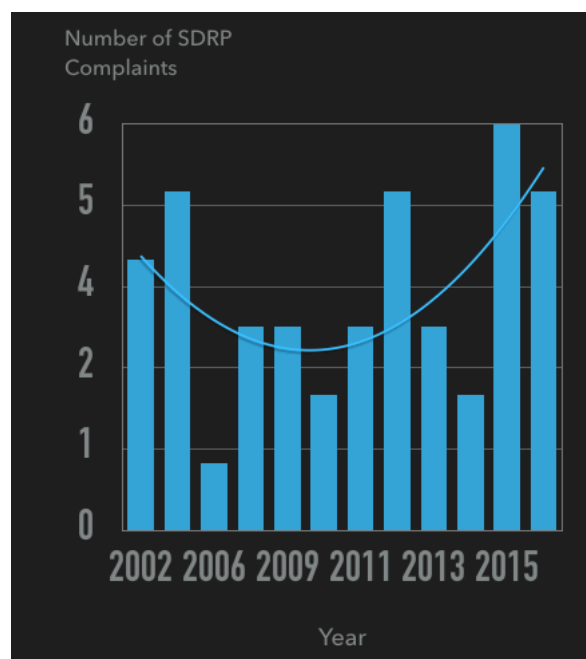


Figure 2: Number of SDRP Complaints by Year

Without an actual examination of every single “.sg” ccTLD, the cybersquatting activity may be estimated through an examination of statistics pertaining to the SDRP. This estimation may be achieved by examining the number of SDRP complaints filed over the years. A high number of complaints will suggest high cybersquatting activity, and the converse is true.

As Figure 2 shows, the number of SDRP complaints over the years has been constantly low, although there has been a pickup over the last two years, indicating an increasing trend of complaints brought forth to SDRP to be resolved. Nevertheless, the low number of complaints

seem to suggest a low level of cybersquatting activity in Singapore, an observation contrary to what we expect.

There are, however, two limitations in using this indicator. Firstly, the low number of complaints may be due to other factors such that there is a reluctance to pursue a case under the SDRP. These include i) costs (i.e. where it is cheaper to buy off the domain from the cybersquatter) or ii) availability of alternative gTLDs to similarly achieve the organisation's needs. Secondly, the low number of complaints needs to be examined in context and comparatively with other jurisdictions.

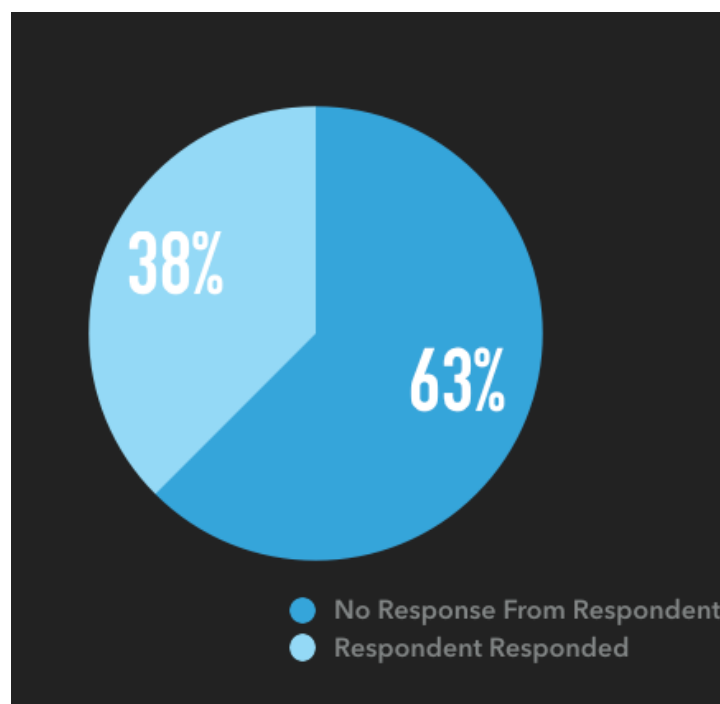


Figure 3: Default Rate in the SDRP

Another estimation of the cybersquatting activity is the examination of the default rate. A high default rate will suggest a high level of cybersquatting activity and vice versa. This stems from the interpretation that abusive registrants see little point in defending the domain names, given that the alternative interpretation that the SDRP procedure moves too fast for the Registrant to respond adequately seems highly unlikely.¹⁴ Hence, the 63% default rate indicated by Figure 3 provides a contrary inference that there is a high level of cybersquatting activity.

¹⁴ Dr. Milton Mueller, *supra* note 12 at 12.

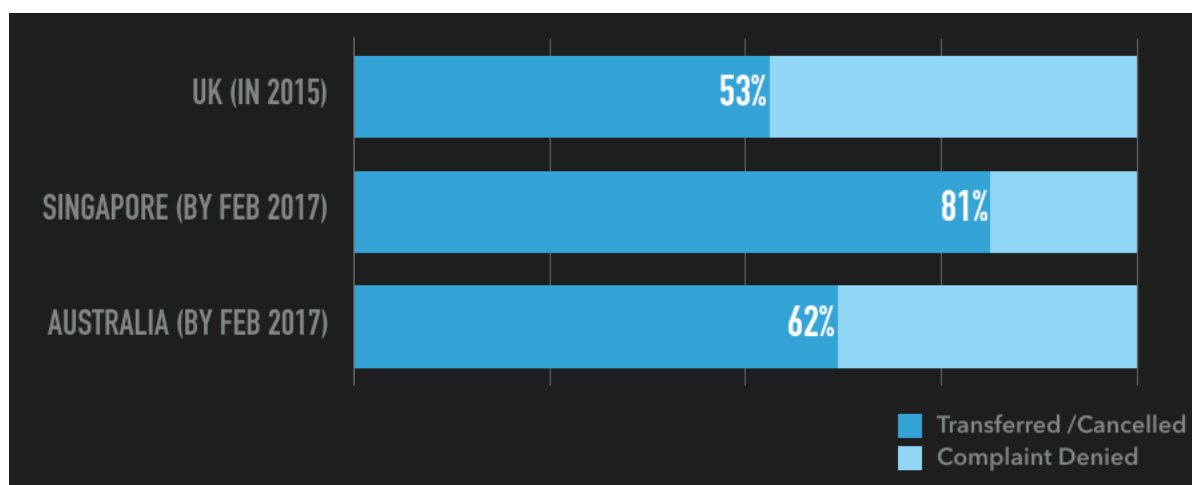


Figure 4: Proportion of Cases decided in favour of the Complainant

One way of putting Singapore's cybersquatting activity into context is by comparison with other ccTLDs. An indicator we can look at is the proportion of cases that were decided in the Complainant's favour. As WIPO suggested, the higher this proportion is, the higher the level of cybersquatting activity in that particular ccTLD.¹⁵ The statistics in Figure 4 seem to suggest that Singapore has the highest level of cybersquatting activity amongst the three jurisdictions given that Singapore has the highest proportion of success rate by the complainants.

However, it must be pointed that UK's statistics is limited to just cases decided in 2015. In a previous study, the complainant's success rate in the UK between 2007-2008 is as high as 80%.¹⁶ Nevertheless, this particular statistic is not definitive given that there may be several reasons account for Figure 4. A possible reason for UK's low success rate may be attributed to the possible poor drafting of complaints by the Complainant without sufficient merit. Without examining the quality of the complaints submitted, it is hard to draw the conclusion that Singapore has the highest cybersquatting activity definitively amongst the three jurisdictions.

¹⁵ *WIPO Arbitration and Mediation Center - New Generic Top-Level Domains: Intellectual Property Considerations (2005 Report)* (WIPO), para 49.

¹⁶ Jenny Ng, *supra* note 3 at 83.

Country	Australia (by Feb 2017)	Canada (by Dec 2014)	Singapore (by Feb 2017)	UK (by Dec 2015)
Complaints (By Jan 2017)	539	274	42	11,124
Total Number of Registrations	6,167,996	2,134,590	175,869	10,140,436
CyberSquatting Ratio	0.00874%	0.01284%	0.02389%	0.10970%

Table 6: Cybersquatting Ratio of the Canada, Australia, Singapore and UK ccTLD¹⁷¹⁸¹⁹

This paper suggests that the most relevant statistic will be the cybersquatting ratio, used and defined by WIPO in its report as a proportion of disputed domain name as a share of domain name registrations.²⁰ Hence, the higher the cybersquatting ratio, the more contentious that space within the particular ccTLD is. This allows us to infer that it has a higher incidence of cybersquatting.

However, a challenge in the present study is that statistics are not readily available across the various jurisdictions on the number of disputed domain names. Hence, the present study proceeds on the assumption that each complaint involves one disputed domain name. It is submitted that although this assumption is readily proven to be a false one, it nevertheless suffices as a good proxy for analytical purposes. Another limitation of this study is that the statistics from various jurisdictions are drawn from different timeframes although it is submitted that any changes in statistics will not be drastic.

Proceeding ahead with the comparative analysis, it suffices to say that Australia adopts a restrictive (*ex-ante*) system, Canada adopts a semi-restrictive system while the UK adopts an

¹⁷ Canadian statistics from “CIRA Factbook 2014”, online: <<https://cira.ca/factbook/2014/the-global-internet.html>>. “CDRP Decisions”, online: CIRA <<https://cira.ca/node/11774>>.

¹⁸ Australian Statistics from “AusRegistry EOM Report for General Release”, online: <<https://www.ausregistry.com.au/wp-content/uploads/2017/03/1702General.pdf>>. “auDRP Archived Proceedings”, online: AUDA <<https://www.auda.org.au/policies/audrp/archived-proceedings/>>.

¹⁹ UK Statistics from “.UK Register Statistics - 2015”, online: Nominet <<https://www.nominet.uk/news/reports-statistics/uk-register-statistics-2015/>>. “2015 in UK web domain dispute resolution”, online: Nominet <<https://nominet-prod.s3.amazonaws.com/wp-content/uploads/2016/07/Nominet-DRS-Report-Infographic-2015.pdf>>.

²⁰ note 17, para 47.

unrestrictive (*ex-post*) system.²¹ Hence, one will expect the cybersquatting ratio to be increasing from Australia, Canada to the UK given that one will expect a higher level of cybersquatting in a more unrestrictive domain registration system. Unsurprisingly, Table 4 reflects this trend and places Singapore between Canada and the UK on the spectrum thus suggesting that Singapore has a relatively high level of cybersquatting activity but still falls short of the UK's.

3. *Implications*

Based on the above observations, it is clear that Singapore exhibits traits of an *ex-post* registration system, producing high domain name registration growth rates while simultaneously suffering a high level of cybersquatting activity, albeit not as high as the UK. This means that the local domain name regime places a lot of emphasis on the efficacy and ability of the SDRP as a curative mechanism to tackle the high level of cybersquatting activity present.

B. THE SINGAPORE DISPUTE RESOLUTION POLICY

In Singapore, the SDRP and relevant rules are modelled after the UDRP framework although modifications are made to suit the local context, such the formal incorporation of mediation as part of the process. The SDRP is incorporated by reference into the Domain Name Registration Agreement, where the registrant is required to submit to the mandatory SDRP proceedings whenever the complainant files a complaint under it. The service may cost as little as \$2,750 over a period as short as 30 working days, a comparable difference as compared to court litigation, although the only remedy available is limited to the cancellation or transfer of the Registrant's domain name to the Complainant.²² It ought, however, to be noted that the SDRP does not preclude court proceedings on domain name disputes prior or after the SDRP process.²³

²¹ Jenny Ng, *supra* note 3 at 32.

²² Phang Hsiao Chung, *supra* note 9 at 116–120.

²³ Torsten Bettinger & Allegra Waddell, *supra* note 1 at 811–13, 825.

In brief, for the Complainant to succeed under the SDRP, it needs to prove three cumulative elements that:

- (1) The registrant's domain name is identical with or confusing similar to a name, trade mark or service mark in which the complainant has rights;
- (2) The registrant has no rights or legitimate interests in respect of the domain name that is the subject of the complaint; and
- (3) The domain name has been registered or is being used in bad faith.

Examining our local SDRP, one way of evaluating the effectiveness of the SDRP is its efficiency in providing a remedy for the Complainant. In this regard, the SDRP stays true to its promise as an efficient ADR given the average length of cases is around 1.5 months. Further, the increase in the SDRP complaints in recent years may also be an indicator of complainant's confidence in the SDRP as a curative mechanism.

However, the effectiveness of the SDRP must be evaluated against its ability to strike a proper balance between the various public and private interests as well. The public interests include the need for consumer protection in the form of more accurate domain names against the need to promote competition and the freedom of speech. The private interests include the need to protect Complainants of their legitimate interests against the need to protect Registrants who are concurrent legitimate right holders as well, an interest undermined by "reverse domain name hijacking".²⁴ Hence, one way of evaluating the SDRP is through an examination as to whether academic criticisms against the UDRP such as the framework's bias towards trademark holders and inconsistency of decisions are similarly present in the SDRP.

²⁴ Warren B. Chik, *supra* note 3 at 32–32.

1. An Overemphasis on Trademarks

OLS Regression Results

Dep. Variable:	Conclusion	R-squared:	0.716
Model:	OLS	Adj. R-squared:	0.617
Method:	Least Squares	F-statistic:	7.248
Date:	Mon, 10 Apr 2017	Prob (F-statistic):	8.51e-05
Time:	16:36:05	Log-Likelihood:	4.8405
No. Observations:	32	AIC:	8.319
Df Residuals:	23	BIC:	21.51
Df Model:	8		
Covariance Type:	nonrobust		

	coef	std err	t	P> t	[95.0% Conf. Int.]	
Intercept	0.3346	0.371	0.903	0.376	-0.432	1.101
No_response_from_respondent	0.0650	0.113	0.573	0.572	-0.170	0.300
Trade_Mark_Registered_in_other_Countries	0.2323	0.100	2.312	0.030	0.024	0.440
Trade_Mark_Registered_in_Singapore	0.0652	0.085	0.770	0.449	-0.110	0.240
Percentage_of_Similarity_of_Words	-0.0003	0.004	-0.084	0.934	-0.008	0.007
Length_of_usage	0.0103	0.027	0.388	0.701	-0.045	0.065
Evidence_of_Circumstances_of_registration_for_valuable_consideration	0.0938	0.074	1.276	0.215	-0.058	0.246
Evidence_of_Attracting_customers_for_commercial_gain_through_likelihood_of_confusion	0.2287	0.086	2.674	0.014	0.052	0.406
Evidence_of_bad_faith_on_other_grounds	0.1868	0.100	1.868	0.075	-0.020	0.394

Omnibus:	3.190	Durbin-Watson:	1.671
Prob(Omnibus):	0.203	Jarque-Bera (JB):	2.082
Skew:	-0.608	Prob(JB):	0.353
Kurtosis:	3.292	Cond. No.	823.

Warnings:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

The number of true positives is 26

The number of true negatives is 5

The number of false positives is 1

The number of false negatives is 0

The accuracy is 96.875%

The precision is 96.2962963%

The recall is 100.0%

The F1 score is 0.981132075472

Figure 5: Overall Linear Regression Results

An analysis was conducted over all the variables and the linear regression analysis captured in Figure 5 proves to be the most appropriate model with an R-square score of 0.716 indicating a good fit, after rejecting other models to avoid overfitting (i.e. Kitchen Sink Regression) and the problems of subjectivity built into some of the dummy variables. This is especially so given that the difference in AIC values between the chosen and rejected models are not huge, hence implying that the trade-off between goodness of fit of model and information lost is not huge.²⁵

Based on Figure 5, a few conclusions may be drawn about the SDRP decision-making in general. Firstly, a positive finding of almost every single factor points towards a positive finding for the complainant and the most significant factors that the Panellists take into account are the existence of a trademark registration in other jurisdictions, evidence that the Registrant is trying to freeride on Complainant's name for commercial gain and evidence of bad faith on other grounds. Secondly, while the percentage of similarity of marks has given us a negative correlation, which does not cohere with our expectations, this particular factor has the highest

²⁵ See Annex III for rejected models.

p-value with the lowest coefficient, suggesting that it is insignificant in the model and may be disregarded.

The above findings suggest that the existence of trademarks with the highest co-efficient is indeed the primary consideration of the Panellist. It is observed that the other two factors pointed out have their basis in trademark law as well. A finding of evidence that the Registrant has been freeriding on the Complainant's name for commercial gain has its roots in Trademark law which looks unfavourably at defendants who seek to freeride on the goodwill for others for personal commercial gain. Similarly, the finding of bad faith on other grounds is inextricably linked to Trademark law. An example may be found in the SDRP case of *Tiger Airways Holdings Limited v Qingdao Ji Feng Co. Ltd*(SDRP-2014/0003(F)) where the Panellist grounded its finding of bad faith based on inferences made that the Registrant likely knew of the Trademark before the registration of the disputed domain name.

OLS Regression Results						
Dep. Variable:	Identical_Confusing_Similarity	R-squared:	0.575			
Model:	OLS	Adj. R-squared:	0.512			
Method:	Least Squares	F-statistic:	9.118			
Date:	Mon, 10 Apr 2017	Prob (F-statistic):	8.53e-05			
Time:	02:37:37	Log-Likelihood:	0.68948			
No. Observations:	32	AIC:	8.621			
Df Residuals:	27	BIC:	15.95			
Df Model:	4					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[95.0% Conf. Int.]	
Intercept	0.1572	0.156	1.007	0.323	-0.163	0.477
Length_of_word	0.0460	0.016	2.860	0.008	0.013	0.079
Trade_Mark_Registered_in_Singapore	0.1076	0.093	1.158	0.257	-0.083	0.298
Trade_Mark_Registered_in_other_Countries	0.0964	0.083	1.165	0.254	-0.073	0.266
Well_Known_Mark	0.2800	0.076	3.688	0.001	0.124	0.436
Omnibus:	6.411	Durbin-Watson:	2.191			
Prob(Omnibus):	0.041	Jarque-Bera (JB):	4.801			
Skew:	-0.875	Prob(JB):	0.0907			
Kurtosis:	3.734	Cond. No.	33.8			
Warnings:						
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.						
The number of true positives is 26						
The number of true negatives is 4						
The number of false positives is 2						
The number of false negatives is 0						
The accuracy is 93.75%						
The precision is 92.8571428571%						
The recall is 100.0%						
The F1 score is 0.962962962963						

Figure 6: Regression Results of Element 1 of SDRP

While some academics have initially commented that the position is unclear where the Complainant has not registered any trademark or service in Singapore under the SDRP²⁶, the linear regression analysis in Figure 6 lays down to rest such concerns. In fact, Figure 6 even goes as far to suggest that the registration of trademarks in other countries carry as much weight as rights in a locally registered trademark. More importantly, where the mark is elevated to a status of a well-known mark, the Panellist will invariably place more emphasis on it and lean towards a finding that there is confusing similarity between the domain name and the identifier which the Complainant is asserting rights over.

²⁶ Richard Wu, “The New Singapore Domain Name Dispute Resolution Policy: the Context of the Common Law and ICANN’s UDRP” (2002) 1(2) Canadian Journal of Law and Technology 93 at 93.

2. Inconsistency of Decisions and the Relevance of Precedents

One common criticism of the domain dispute resolution framework is its potential to produce inconsistent decisions given the ability for extremely wide interpretation of the relevant clauses and the lack of a *stare decisis* system, ensuring that tribunals will make consistent decisions when similar facts appear before them.

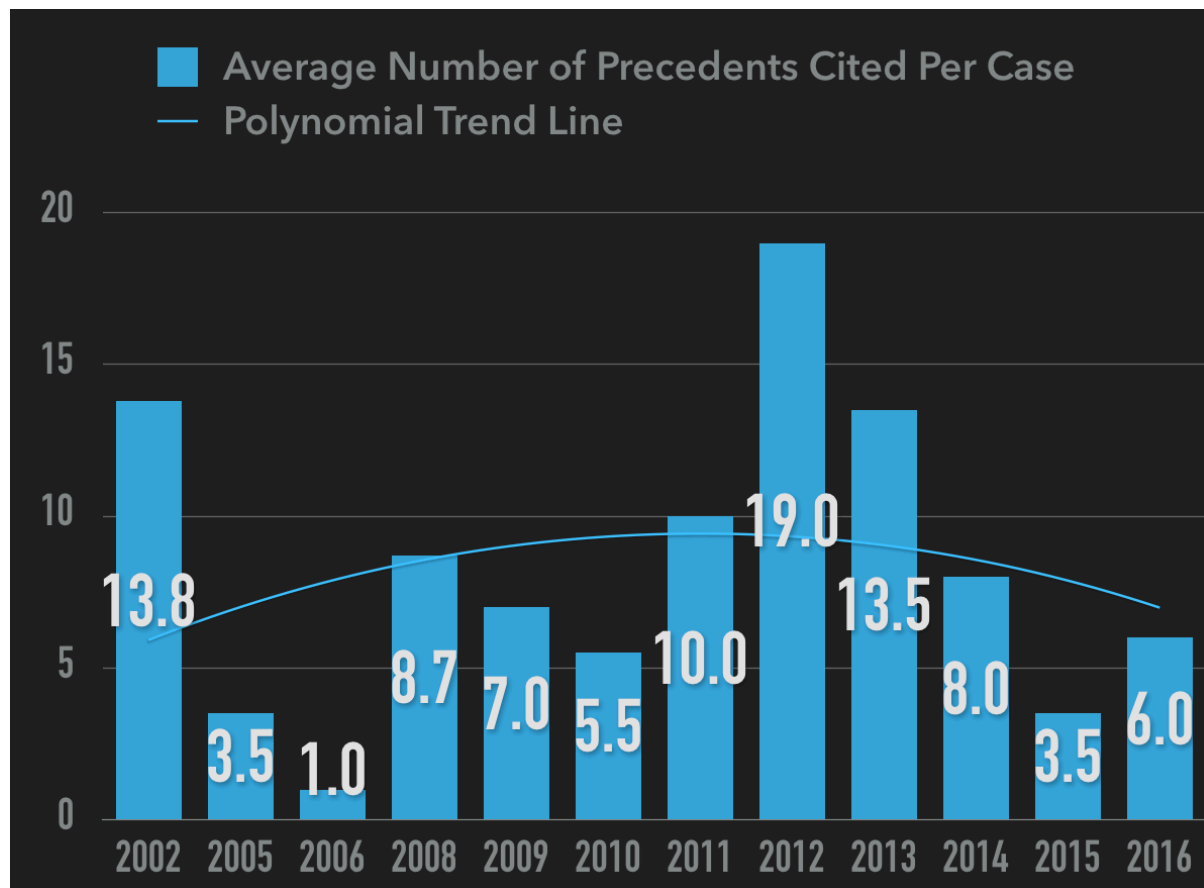


Figure 7: Bar chart showing Average Number of Precedents Cited Per Case

One way of ensuring that there is consistency amongst the decisions is the usage of precedents which guide the Panellists' decisions even though there is no mandatory requirement for such requirement. Figure 7 shows that the average number of precedents cited per SDRP decision has been rather high thus suggesting consistency in the SDRP. However, a thing to note which is not captured by Figure 7 is that there are few written SDRP decisions with no precedents at all, hence are outliers not captured properly by the chart above.

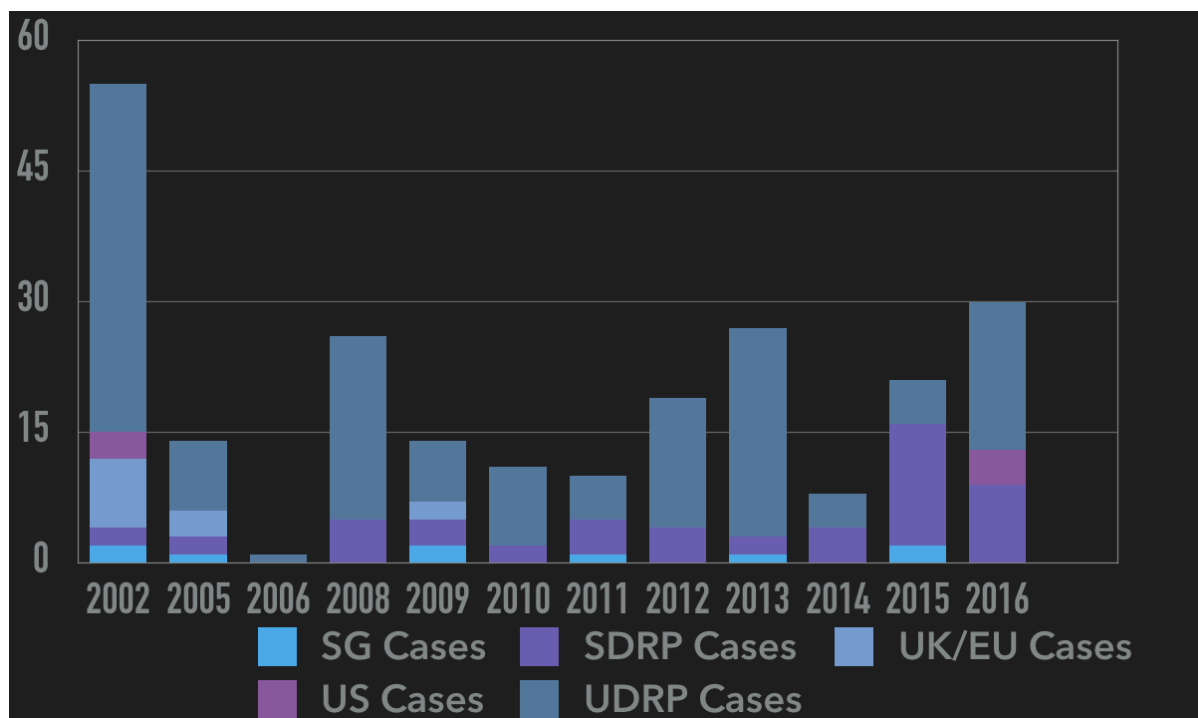


Figure 8: Proportion of various Precedents cited in SDRP Cases

However, it is submitted that in practice given the high usage of case precedents, there appear to be minimal problems concerning inconsistency under the SDRP framework despite a lack of mandatory requirement for precedents as a basis for decision-making. Figure 8 similarly supports the above observation in that there is a gradual build-up of our local repository of precedents, in the form of SDRP cases cited, thereby ensuring that the consistent application of principles where similar fact patterns are before them.

Another interesting observation is the huge influence that the UDRP cases have on our local SDRP decisions. While this is to be expected given that the SDRP is modelled on the UDRP, this may also signal that where there are problematic interpretations under the UDRP, they may be similarly imported into our local decisions as well, hence possibly accounting for the huge influence accorded to trademarks in Panellists' decision-making as observed earlier.

3. Panellists' Bias

OLS Regression Results						
Dep. Variable:	Conclusion	R-squared:	0.117			
Model:	OLS	Adj. R-squared:	0.056			
Method:	Least Squares	F-statistic:	1.914			
Date:	Mon, 10 Apr 2017	Prob (F-statistic):	0.166			
Time:	17:56:22	Log-Likelihood:	-13.317			
No. Observations:	32	AIC:	32.63			
Df Residuals:	29	BIC:	37.03			
Df Model:	2					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[95.0% Conf. Int.]	
Intercept	0.6667	0.222	2.996	0.006	0.212	1.122
Panelist_Type[T.Academic]	-0.1667	0.294	-0.566	0.576	-0.769	0.435
Panelist_Type[T.Practitioner]	0.2133	0.235	0.906	0.372	-0.268	0.695
Omnibus:	12.201	Durbin-Watson:	1.418			
Prob(Omnibus):	0.002	Jarque-Bera (JB):	11.757			
Skew:	-1.411	Prob(JB):	0.00280			
Kurtosis:	3.927	Cond. No.	7.73			

Figure 9: Regression Analysis Using Panellist Types

Figure 9 is a linear regression analysis examining whether the type of Panellists (i.e. AGC/IPOS Officers, Academic or Practitioner) will affect the decision outcome. The low R-squared score of 0.117 indicates that the relationship if any is an extremely weak one and insignificant. Therefore, one may conclude that there is no bias amongst the various panellists when it comes to their background, an allegation some academics hold against the UDRP framework.

C. AN EVALUATION BASED ON SINGAPORE'S CIRCUMSTANCES AND POLICIES

While it has been observed that a good regulatory framework is one which strikes a proper balance between the competing interests, ultimately what is the proper balance is dependent on our national policies, priorities, circumstances and needs. Hence, a normative evaluation of the findings above cannot be discussed in a vacuum but rather with consideration of our local peculiarities.

In Singapore, we are a nation seeking to build on the extremely high Internet penetration to establish ourselves as a technological hub as we embark on a transformation towards an innovative economy. Hence, Singapore should not only expect greater increases in Internet usage locally but also from the increased globalisation of businesses in the region as well. The need to promote growth and competition is and will naturally be a top priority in Singapore.

There is a clear impetus to continue our adoption of the unrestricted domain name regime given Singapore's expectations of a high volume of domain name registrations.²⁷ The restrictive system will not only slow down the ease by which one sets up an Internet presence in Singapore but also imposes huge costs on the entire domain name regime, rendered it clearly unsuitable for Singapore's ambitions. Nevertheless, the preventive mechanisms as adopted locally are an important component of our domain name regime. Despite the draw of a fully unrestrictive system, there remains a need by intellectual property owners for preventive mechanisms in place given the perceived insufficiency of the curative mechanism alone.²⁸ In this aspect, the 2016 collaboration between IPOS and SGNIC is not only a good example but the right way going forward.

However, unlike other jurisdictions with alternative means by which trademark owners may seek proper remedies such as the United States with their Anticybersquatting Consumer Protection Act²⁹, it would appear that the only remedy available for local aggrieved trademark owners remain traditional intellectual property law which has proven to be severely inadequate given the confines of trademark law as well as the lack of a general tort of unfair competition. This therefore highlights the importance of the SDRP given that it is the only mechanism for one to seek an appropriate remedy and the importance that the SDRP is able to strike the proper balance between competing interests of all stakeholders, and this must mean that the appropriate authorities ought to relook at the SDRP where there are potential for abuse by either party to maintain its relevance for the years to come.

Hence, in spite of the various criticisms about the shortfalls of the SDRP, it is submitted that the local domain name regime nevertheless ought to be maintained. The current domain name regime strikes a good mix between the usage of both preventive and curative mechanisms. Further, the SDRP has also proven to be an effective ADR to resolve domain name disputes in Singapore and ultimately remains the key tool by which the system curbs the problem of cybersquatting thus promoting the development of electronic commerce in Singapore while boosting consumer confidence.³⁰

²⁷ Jenny Ng, *supra* note 3 at 64.

²⁸ *Ibid* at 25.

²⁹ *Ibid* at 65.

³⁰ Richard Wu, *supra* note 27 at 96.

However, the present study also confirms fears in the early days of adoption of the SDRP that the implementation of the SDRP is likely to be biased towards trademark owners.³¹ Hence, without throwing the baby out with the bathwater, in a bid to address the problem of an overly huge significance given to trademarks considerations in this SDRP framework, a few recommendations previously surfaced may be extremely relevant to tweak the system within the limits of the SDRP.³² These include:

- i) Deterrence: Inclusion of more remedies against both parties such as damages or even punitive damages to not only serve as a deterrent effect against cybersquatters but also complaints brought in bad faith as well.
- ii) Sanctions: Inclusion of specific sanctions against reverse domain name hijacking.
- iii) Burden of Proof and Interpretation: Clarification to be sought on the burden of proof required under SDRP as well as any presumptions which may or may not be read into it to prevent an overly wide interpretation of various elements in the SDRP.

V. CONCLUSION

In conclusion, this paper hopes that through the quantitative analysis of the local SDRP decisions and domain name registrations system, it has achieved its research objectives and showed how the Singapore *ex-post* domain registration system remains a good one, although it is similarly suggested that improvements may be made to the current system to ensure its relevance in tackling the problem of cybersquatting without becoming a tool by large trademark owners to engage in anti-competitive behavior.

However, as Lessig has famously suggested, a proper consideration of regulatory frameworks surrounding the cyberspace ought to involve the four modalities of code, market, law and norms. Regrettably, this paper is limited to the consideration of law and its impact on the domain name registration system. Hence, this remains an area of consideration for additional evaluation to provide a more robust analysis of our local regulatory framework to ensure its continued relevance in Singapore's ambition to be a regional technological hub.

³¹ *Ibid* at 97.

³² See Warren B. Chik, *supra* note 3 at 59–61.

ANNEX I – LIST OF ATTRIBUTES

Attributes	Description
Conclusion	The key dependent variable in this study indicating the Panellist's decision, for or against the Complainant. It is a qualitative, binary dependent attribute by which the predictors below seek to measure
Identical / Confusingly Similar to Mark	Whether the Registrant's domain name is identical or confusingly similar to a name, trademark or service mark in which the Complainant has rights;
Registrant has no legitimate interests in domain name	Whether the Complainant has shown the Registrant has no rights or legitimate interests in respect of the domain name;
Evidence of Bad Faith	Whether the Complainant has shown that the Registrant's domain name has been registered or is being used in bad faith.

Element	Attributes	Description
Identical/Confusingly Similar to Mark	Existence of Trademark	Whether the Complainant has rights over a registered trademark.
	Trademark registered in Singapore	Whether the Trademark is registered in Singapore.
	Trademark registered in other Countries	Whether the Trademark is registered in other countries.
	Length of Trademark registered in Singapore	What is the Length of the Period where the Trademark has been registered in Singapore.
	Well-Known Mark	Whether the said mark qualifies the legal definition of a well-known mark.
	Foreign Brand	Whether the complainant's right constitute a foreign brand.

	Well-Known Foreign Brand	Whether the Complainant's right constitute a foreign brand.
	Goodwill	Whether the Complainant's business was found to have goodwill
	Sales	What is the quantitative value of sales adduced as evidence?
	Advertising	What is the quantitative value of advertising costs adduced as evidence?
	Made Up Word	Whether the word of the domain name is a made-up word not belonging to a particular language.
	English Word	Whether the word of the domain name is an English word
	Length of Word	Number of Characters in Domain name
	Domain a Variation of Mark or Brand	Whether the domain name is a variation or permutation of the Complainant's mark
	Identical Words	Whether the domain name and mark's words are identical.
	Similar Words	Whether the domain name and mark's words are similar.
	Percentage Similarity of Words	What is the quantitative value of the percentage of similarity between domain name and mark as calculated by number of similar characters over total characters?
	Similarity of Pronunciation / Aural Similarity	Whether the domain name and the mark has aural similarity.
Registrant has no	Respondent showed Bona Fide usage	Whether the respondent has showed usage of domain name or demonstrable preparations to use domain name in connection with a bona fide offering of goods or services.

legitimate interests in domain name	Respondent showed they were commonly known by a market or sector of the public	Whether the respondent has showed that they were commonly known by a market or sector by that name (i.e. domain name)
	Respondent showed they had used the domain name fairly	Whether the respondent has showed that they are making a legitimate non-commercial or fair use of the domain name, without intent for commercial gain to misleadingly divert consumers or to tarnish the trademark or service mark at issue.
	Respondent's usage of domain	A categorical variable describing the Respondent's usage of domain (i.e. whether the domain name was blank, used for sale/rent/advertisements, redirect to other websites, legitimate usage of domain name)
	Length of Usage	A quantitative variable of how long has the Respondent's usage of the domain name been.
	Complainant Prior Ownership	Whether the complainant had prior ownership of the domain name prior to the respondent.
Evidence of Bad Faith	Evidence of Circumstances of Registration for Valuable Consideration	Whether there are circumstances indicating that the Registrant has registered or acquired the domain name primarily for the purpose of selling, renting, or otherwise transferring the domain name registration to the Complainant, who bears the name or is the owner of the trademark or service mark, or to a competitor of that Complainant, for valuable consideration in excess of the Registrant's documented out-of-pocket costs directly related to the domain name.

	Evidence of Registration to Prevent Trademark Owner Usage	Whether there is evidence that the Registrant has registered the domain name in order to prevent the owner of the trademark or service mark from reflecting the mark in a corresponding domain name, provided that the Registrant has engaged in a pattern of such conduct.
	Evidence of Registration to Disrupt Business of Trademark Proprietor	Whether there is evidence that the Registrant has registered the domain name primarily for the purpose of disrupting the business of a competitor.
	Evidence of Attracting Customers for Commercial Gain Through Likelihood of Confusion	Whether there is evidence that by using the domain name, the Registrant has intentionally attempted to attract, for commercial gain, Internet users to the Registrant's website or other on-line location, by creating a likelihood of confusion with the Complainant's name or mark as to the source, sponsorship, affiliation, or endorsement of the Registrant's website or location or of a product or service on the Registrant's website or location.
	Evidence of Bad Faith on Other Grounds	Whether the Panellist came to the conclusion that there was bad faith on other grounds not stipulated in the SDRP.
	Did Respondent respond	Whether the Respondent responded to the complainant and made submissions accordingly.
	Prior commercial relationship between parties	Whether there was any prior commercial relationship between the Complainant and the Respondent.

General Attributes	
Length of Case	Year of Judgment
Country of Respondent	Country of Complainant
Industry of the Complainant	Industry of the Respondent
Panellist	Panellist Profession
Attempted to Settle	Number of Attempts to Settle
Attempted to Mediate	Number of Actual Mediations

ANNEX II – DATA OBTAINED

<u>SUMMARY OF ATTRIBUTES</u>	
LEGEND	
1 = Yes / Present in Judgment	
0 = No / Not mentioned in Judgment	
-1 = No	
<u>General Attributes</u>	
<p>Conclusion</p> <p>1 26</p> <p>0 6</p> <p>Name: Conclusion, dtype: int64</p> <p>Length of Cases (in Months)</p> <p>1.0 13</p> <p>2.0 9</p> <p>1.5 8</p> <p>3.0 1</p> <p>2.5 1</p> <p>Name: Length_of_Cases_in_months, dtype: int64</p> <p>Year of Judgment</p> <p>2015 6</p> <p>2016 5</p> <p>2005 4</p> <p>2002 4</p> <p>2008 3</p> <p>2013 2</p> <p>2010 2</p> <p>2009 2</p> <p>2014 1</p> <p>2012 1</p> <p>2011 1</p> <p>2006 1</p> <p>Name: Year_of_Judgment, dtype: int64</p> <p>Country of Respondent</p> <p>1Singapore 18</p> <p>China 8</p> <p>Taiwan 1</p> <p>Japan 1</p> <p>India 1</p> <p>Name: Country_of_Respondent, dtype: int64</p> <p>Country of Complainant</p> <p>USA 14</p> <p>Singapore 8</p> <p>China 2</p> <p>UK 1</p> <p>Turkey 1</p> <p>Switzerland 1</p> <p>Luxembourg 1</p>	<p>Panelist Type</p> <p>Practitioner 25</p> <p>Academic 4</p> <p>AGC/IPOS 3</p> <p>Name: Panelist_Type, dtype: int64</p> <p>Was there an Attempt to Settle</p> <p>0 26</p> <p>1 6</p> <p>Name: Attempts_to_settle, dtype: int64</p> <p>Number of Attempts to Settle</p> <p>0 27</p> <p>1 3</p> <p>2 2</p> <p>Name: Number_of_settle_attempts, dtype: int64</p> <p>Was there Mediation Prior to this?</p> <p>0 31</p> <p>1 1</p> <p>Name: Mediation_prior, dtype: int64</p> <p>How many attempts were there to Mediate?</p> <p>0 30</p> <p>1 2</p> <p>Name: Mediaiton_Prior_attempts, dtype: int64</p> <p>Number of Singaporean cases cited?</p> <p>0 25</p> <p>1 5</p> <p>2 2</p> <p>Name: No_Cited_SG_Cases, dtype: int64</p> <p>Number of SDRP cases cited?</p> <p>0 12</p> <p>2 8</p> <p>1 6</p> <p>4 3</p> <p>9 1</p> <p>5 1</p> <p>3 1</p> <p>Name: No_Cited_SDRP_cases, dtype: int64</p> <p>Number of UK and EU cases cited?</p>

<p>Korea 1</p> <p>India 1</p> <p>Germany 1</p> <p>France 1</p> <p>Name: Country_of_Complainant, dtype: int64</p> <p>Industry of Complainant</p> <p>Retail 7</p> <p>Others 7</p> <p>Internet 5</p> <p>F&B 4</p> <p>Automotive 4</p> <p>Pharmaceutical 2</p> <p>Retail 1</p> <p>Fashion 1</p> <p>Airlines 1</p> <p>Name: Industry_Complainant, dtype: int64</p> <p>Industry of Respondent</p> <p>Others 5</p> <p>Retail 3</p> <p>Internet 3</p> <p>Software 1</p> <p>Retail 1</p> <p>F&B 1</p> <p>Automotive 1</p> <p>Name: Industry_Registrant, dtype: int64</p> <p>Panelist</p> <p>Tan Tee Jim SC 5</p> <p>Stanley Lai SC 5</p> <p>Jim Lim 5</p> <p>Joyce A Tan 4</p> <p>Murgiana Haq 3</p> <p>Phang Hsiao Chung 2</p> <p>David Llewelyn 2</p> <p>Richard Tan 1</p> <p>Ng-Loy Wee Loon 1</p> <p>Jonathan Kok 1</p> <p>Jo-Ann See 1</p> <p>Daren Tang Heng Shim 1</p> <p>Daniel Seng 1</p> <p>Name: Panelist, dtype: int64</p>	<p>0 28</p> <p>2 2</p> <p>6 1</p> <p>3 1</p> <p>Name: No_Cited_UK_EU_cases, dtype: int64</p> <p>Number of US cases cited?</p> <p>0 30</p> <p>4 1</p> <p>3 1</p> <p>Name: No_Cited_US_Cases, dtype: int64</p> <p>Number of WIPO/UDRP cases cited?</p> <p>0 8</p> <p>1 5</p> <p>4 4</p> <p>12 2</p> <p>9 2</p> <p>7 2</p> <p>5 2</p> <p>2 2</p> <p>18 1</p> <p>16 1</p> <p>15 1</p> <p>10 1</p> <p>6 1</p> <p>Name: No_Cited_WIPO_UDRP_cases, dtype: int64</p>
Element 1 - Identical / Confusing Similarity	
<p>Is the word a Made Up Word?</p> <p>1 17</p> <p>0 15</p> <p>Name: Made_up_word, dtype: int64</p> <p>Is the word an English Word?</p> <p>1 18</p> <p>0 14</p> <p>Name: English_word, dtype: int64</p> <p>Length of Word?</p> <p>9 7</p> <p>8 7</p> <p>7 4</p> <p>12 3</p>	<p>Name: Length_of_Trade_Mark_SG, dtype: int64</p> <p>Is the mark a Well-Known Mark?</p> <p>1 17</p> <p>0 12</p> <p>-1 3</p> <p>Name: Well_Known_Mark, dtype: int64</p> <p>Is the Complainant a foreign brand?</p> <p>1 28</p> <p>0 4</p> <p>Name: Foreign_brand, dtype: int64</p> <p>Is the Complainant a well-known foreign brand?</p> <p>1 22</p>

11 2 10 2 4 2 18 1 15 1 13 1 6 1 3 1 Name: Length_of_word, dtype: int64 Is the Domain a variation of the Complainant's mark or brand? 0 26 1 6 Name: Domain_a_variation_of_mark_or_brand, dtype: int64 Does the Complainant have an existing trade mark? 1 30 -1 2 Name: Existence_of_Trade_Mark, dtype: int64 Is the Complainant's trademark registered in Singapore? 1 27 -1 3 0 2 Name: Trade_Mark_Registered_in_Singapore, dtype: int64 Is the Trademark registered in other Countries? 1 26 -1 3 0 3 Name: Trade_Mark_Registered_in_other_Countries, dtype: int64 Length the trademark has been registered in Singapore? (in years) 0 8 14 3 13 3 5 3 23 2 11 2 6 2 26 1 55 1 16 1 15 1 12 1 10 1 9 1 8 1 4 1	0 10 Name: Well_known_Foreign_Brand, dtype: int64 Are the domain name and Complainant's mark identical or confusingly similar? 1 27 0 5 Name: Identical_Confusing_Similarity, dtype: int64 Are the domain name and Complainant's mark exactly identical? 1 31 0 1 Name: Identical_Words, dtype: int64 Are the domain name and Complainant's mark similar? 1.0 31 Name: Similar_words, dtype: int64 What is the % that the words are similar? 100 26 50 2 71 2 90 1 86 1 Name: Percentage_of_Similarity_of_Words, dtype: int64 Are the pronunciation of the words similar? 1 32 Name: Pronunciation_Similarity, dtype: int64
<u>Element 2 - Complainant showed Respondent has no legitimate interests in the domain name</u>	
Has the Complainant showed that the Registrant has no legitimate interests in the domain name? 1 27	Length of Usage of Domain Name? 0.000000 21 5.000000 3

<p>0 5 Name: Complainant_Showed_Registrant_No_Legitimate_In terests, dtype: int64</p> <p>Did the Complainant have prior ownership of the Domain name? 0 24 1 8 Name: Complainant_Prior_ownership, dtype: int64</p> <p>Did the Respondent show bona fide registration / usage of the domain name? -1 18 0 10 1 4 Name: Respondent_Showed_Bona_Fide, dtype: int64</p> <p>Did the Respondent show that they had used the domain name fairly? -1 15 0 14 1 3 Name: Respondent_showed_fair_use, dtype: int64</p> <p>Did the Respondent show that they are commonly known to a section of the market? 0 17 -1 13 1 2 Name: Respondent_Showed_Commonly_Known, dtype: int64</p> <p>Has the Respondent been using the Domain Name? 1 16 0 15 2 1 Name: Respondent_using_Domain_Name, dtype: int64</p> <p>How has the Respondent been using the Domain Name? 3 10 1 9 2 7 0 6 Name: Usage_of_Domain_name, dtype: int64</p> <p>* NOTE - Legend 0 - Respondent did not use the domain name 1 - Respondent used the domain name for sale/rent/advertisements 2 - Respondent used the domain name to redirect to another site / their own site's business 3 - Respondent had legitimate usage of the domain name</p>	<p>1.000000 2 6.000000 2 0.333333 1 8.000000 1 2.000000 1 3.000000 1 Name: Length_of_usage, dtype: int64</p> <p>Does the Respondent have localised goodwill attached to its domain name in Singapore? 0 27 1 5 Name: Existence_of_localised_goodwill, dtype: int64</p> <p>Does the Respondent have localised goodwill attached to its domain name in Singapore? 0 28 Local customers 4 Name: Group_of_goodwill, dtype: int64</p> <p>Did the Complainant abandon the domain name? 0 32 Name: Abandonment_by_Complainant, dtype: int64</p>
Element 3 - Respondent Registered/Used Domain Name in Bad Faith	

<p>Is there evidence of Circumstances of registration for valuable consideration?</p> <p>0 15 1 13 -1 4</p> <p>Name: Evidence_of_Circumstances_of_registration_for_valuable_consideration, dtype: int64</p> <p>Is there evidence of registration to prevent Trademark owner usage?</p> <p>0 23 1 5 -1 4</p> <p>Name: Evidence_of_Registration_to_prevent_Trademark_owner_usage, dtype: int64</p> <p>Is there evidence of registration to disrupt business of Trademark proprietor?</p> <p>0 29 -1 2 1 1</p> <p>Name: Evidence_of_registration_to_disrupt_business_of_trademark_proprietor, dtype: int64</p> <p>Is there evidence of registration to attract customers for commercial gain through likelihood of confusion?</p> <p>1 19 0 11 -1 2</p> <p>Name: Evidence_of_Attracting_customers_for_commercial_gain_through_likelihood_of_confusion, dtype: int64</p>	<p>Is there evidence of bad faith on other grounds?</p> <p>0 17 1 15</p> <p>Name: Evidence_of_bad_faith_on_other_grounds, dtype: int64</p> <p>Did the Respondent attempt to sell the domain name?</p> <p>0 19 1 12 -1 1</p> <p>Name: Respondent_Attempt_to_sell, dtype: int64</p> <p>Did the Respondent respond to the Complainant?</p> <p>0 20 1 12</p> <p>Name: Did_Respondent_Respond, dtype: int64</p> <p>No response from respondent</p> <p>1 20 0 12</p> <p>Name: No_response_from_respondent, dtype: int64</p> <p>Was there a prior commercial relationship between the parties?</p> <p>0 20 1 7 -1 5</p>
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ANNEX III – REJECTED AND UNUSED REGRESSION MODELS

OLS Regression Results					

Dep. Variable:	Conclusion	R-squared:	0.773		
Model:	OLS	Adj. R-squared:	0.680		
Method:	Least Squares	F-statistic:	8.320		
Date:	Mon, 10 Apr 2017	Prob (F-statistic):	2.65e-05		
Time:	03:17:44	Log-likelihood:	8.4181		
No. Observations:	32	AIC:	3.164		
Df Residuals:	22	BIC:	17.82		
Df Model:	9				
Covariance Type:	nonrobust				

	coef	std err	t	P> t	[95.0% Conf. Int.]

Intercept	0.1961	0.347	0.565	0.578	-0.523 0.916
No_response_from_respondent	0.1444	0.104	1.395	0.177	-0.070 0.359
Well_known_Foreign_Brand	0.3291	0.098	3.365	0.003	0.126 0.532
Trade_Mark_Registered_in_Singapore	0.0682	0.075	0.907	0.374	-0.088 0.224
Percentage_of_Similarity_of_Words	-0.0002	0.003	-0.069	0.946	-0.007 0.007
Length_of_usage	0.0089	0.024	0.377	0.710	-0.040 0.058
Evidence_of_Circumstances_of_registration_for_valuable_consideration	0.0641	0.068	0.942	0.356	-0.077 0.205
Evidence_of_Attracting_customers_for_commercial_gain_through_likelihood_of_confusion	0.2928	0.076	3.860	0.001	0.135 0.450
Evidence_of_bad_faith_on_other_grounds	0.1840	0.092	2.007	0.057	-0.006 0.374
Respondent_Attempt_to_sell	-0.0047	0.089	-0.053	0.958	-0.189 0.180

Omnibus:	3.678	Durbin-Watson:	1.797		
Prob(Omnibus):	0.159	Jarque-Bera (JB):	1.546		
Skew:	-0.036	Prob(JB):	0.462		
Kurtosis:	1.925	Cond. No.	845.		

Warnings:					
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.					
The number of true positives is 26					
The number of true negatives is 6					
The number of false positives is 0					
The number of false negatives is 0					
The accuracy is 100.0%					
The precision is 100.0%					
The recall is 100.0%					
The F1 score is 1.0					

Rejected Model A: Rejected as an overall model even though it has a higher R-square score to avoid problem related to subjectivity attached to the dummy variable

OLS Regression Results						
Dep. Variable:	Conclusion	R-squared:	0.893			
Model:	OLS	Adj. R-squared:	0.805			
Method:	Least Squares	F-statistic:	10.13			
Date:	Mon, 10 Apr 2017	Prob (F-statistic):	1.20e-05			
Time:	03:17:44	Log-Likelihood:	20.452			
No. Observations:	32	AIC:	-10.90			
Df Residuals:	17	BIC:	11.08			
Df Model:	14					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[95.0% Conf. Int.]	
Intercept	0.3114	0.216	1.439	0.168	-0.145	0.768
Panelist_Type[T.Academic]	-0.2017	0.209	-0.966	0.347	-0.642	0.239
Panelist_Type[T.Practitioner]	-0.1472	0.176	-0.837	0.414	-0.518	0.224
Usage_of_Domain_name[T.1]	0.0960	0.113	0.851	0.407	-0.142	0.334
Usage_of_Domain_name[T.2]	0.0238	0.111	0.214	0.833	-0.211	0.259
Usage_of_Domain_name[T.3]	0.1514	0.127	1.192	0.250	-0.117	0.419
Attempts_to_settle	0.0003	0.108	0.002	0.998	-0.228	0.229
Mediation_prior	-0.5412	0.353	-1.531	0.144	-1.287	0.205
No_response_from_respondent	0.0161	0.105	0.152	0.881	-0.206	0.238
Well_known_Foreign_Brand	0.3162	0.090	3.521	0.003	0.127	0.506
Trade_Mark_Registered_in_Singapore	0.0724	0.085	0.856	0.404	-0.106	0.251
Respondent_Showed_Bona_Fide	-0.1878	0.078	-2.422	0.027	-0.351	-0.024
Evidence_of_Circumstances_of_registration_for_valuable_consideration	0.0906	0.069	1.309	0.208	-0.055	0.237
Evidence_of_Attracting_customers_for_commercial_gain_through_likelihood_of_confusion	0.2641	0.070	3.789	0.001	0.117	0.411
Evidence_of_bad_faith_on_other_grounds	0.1046	0.078	1.334	0.200	-0.061	0.270
Omnibus:	3.176	Durbin-Watson:	2.358			
Prob(Omnibus):	0.204	Jarque-Bera (JB):	1.439			
Skew:	-0.017	Prob(JB):	0.487			
Kurtosis:	1.962	Cond. No.	30.7			
Warnings:						
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.						
The number of true positives is 26						
The number of true negatives is 6						
The number of false positives is 0						
The number of false negatives is 0						
The accuracy is 100.0%						
The precision is 100.0%						
The recall is 100.0%						
The F1 score is 1.0						

Rejected Model B: Rejected as an overall model even though it has a really high R-squared model for fear of overfitting given the huge number of variables, it is invariably going to be the best model.

OLS Regression Results					
Dep. Variable:	Conclusion	R-squared:	0.179		
Model:	OLS	Adj. R-squared:	0.123		
Method:	Least Squares	F-statistic:	3.172		
Date:	Mon, 10 Apr 2017	Prob (F-statistic):	0.0568		
Time:	17:56:22	Log-Likelihood:	-12.135		
No. Observations:	32	AIC:	30.27		
Df Residuals:	29	BIC:	34.67		
Df Model:	2				
Covariance Type:	nonrobust				
	coef	std err	t	P> t	[95.0% Conf. Int.]
Intercept	0.8000	0.074	10.770	0.000	0.648 0.952
Attempts_to_settle	0.2000	0.169	1.185	0.246	-0.145 0.545
Mediation_prior	-0.8000	0.379	-2.112	0.043	-1.575 -0.025
Omnibus:	15.803	Durbin-Watson:	1.900		
Prob(Omnibus):	0.000	Jarque-Bera (JB):	17.154		
Skew:	-1.697	Prob(JB):	0.000188		
Kurtosis:	4.160	Cond. No.	5.90		

Unused Model A: Unused Regression Model examining for possible relationship between prior settlement attempts and a finding in favour of the complainant. This model shows that there is no such correlation and may be useful in refuting any such allegations under the SDRP.

OLS Regression Results						
Dep. Variable:	Complainant_Showed_Registrant_No_Legitimate_Interests			R-squared:	0.496	
Model:	OLS			Adj. R-squared:	0.376	
Method:	Least Squares			F-statistic:	4.109	
Date:	Mon, 10 Apr 2017			Prob (F-statistic):	0.00528	
Time:	02:41:44			Log-Likelihood:	-2.0082	
No. Observations:	32			AIC:	18.02	
Df Residuals:	25			BIC:	28.28	
Df Model:	6					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[95.0% Conf. Int.]	
Intercept	0.6975	0.128	5.442	0.000	0.434	0.962
Usage_of_Domain_name[T.1]	0.0275	0.160	0.172	0.864	-0.301	0.357
Usage_of_Domain_name[T.2]	0.0954	0.164	0.582	0.566	-0.242	0.433
Usage_of_Domain_name[T.3]	-0.0846	0.168	-0.504	0.619	-0.430	0.261
Respondent_Showed_Bona_Fide	-0.0332	0.159	-0.208	0.837	-0.362	0.295
Respondent_showed_fair_use	-0.2104	0.134	-1.565	0.130	-0.487	0.066
Respondent_Showed_Commonly_Known	-0.1473	0.124	-1.188	0.246	-0.403	0.108
Omnibus:	4.454	Durbin-Watson:	2.289			
Prob(Omnibus):	0.108	Jarque-Bera (JB):	3.028			
Skew:	-0.708	Prob(JB):	0.220			
Kurtosis:	3.516	Cond. No.	7.34			

Warnings:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
The number of true positives is 26
The number of true negatives is 3
The number of false positives is 3
The number of false negatives is 0
The accuracy is 90.625%
The precision is 89.6551724138%
The recall is 100.0%
The F1 score is 0.945454545455

Unused Model B: Unused Regression Model examining for the most salient factor that Panellists take into when finding if the Complainant has successfully shown that the Registrant has no legitimate interests

OLS Regression Results

```

=====
Dep. Variable:   Evidence_of_bad_faith   R-squared:         0.600
Model:          OLS                     Adj. R-squared:    0.504
Method:         Least Squares           F-statistic:       6.245
Date:           Mon, 10 Apr 2017         Prob (F-statistic): 0.000415
Time:           02:55:36                 Log-Likelihood:    1.6667
No. Observations: 32                     AIC:              10.67
Df Residuals:   25                       BIC:              20.93
Df Model:        6
Covariance Type: nonrobust

=====
                    coef    std err          t      P>|t|      [95.0% Conf. Int.]
-----
Intercept                0.5038      0.087       5.821     0.000       0.326     0.682
No_response_from_respondent 0.0777      0.104       0.746     0.463     -0.137     0.292
Evidence_of_registration_to_disrupt_business_of_trademark_proprietor -0.1506      0.194     -0.775     0.446     -0.551     0.250
Evidence_of_Circumstances_of_registration_for_valuable_consideration 0.1798      0.091       1.970     0.060     -0.008     0.368
Evidence_of_Registration_to_prevent_Trademark_owner_usage 0.0332      0.120       0.276     0.784     -0.214     0.281
Evidence_of_Attracting_customers_for_commercial_gain_through_likelihood_of_confusion 0.3166      0.083       3.818     0.001       0.146     0.487
Evidence_of_bad_faith_on_other_grounds 0.1427      0.099       1.443     0.161     -0.061     0.346

=====
Omnibus:                 5.322   Durbin-Watson:           1.843
Prob(Omnibus):           0.070   Jarque-Bera (JB):         4.079
Skew:                    -0.860   Prob(JB):                 0.130
Kurtosis:                3.321   Cond. No.                 6.68

=====
Warnings:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
The number of true positives is 26
The number of true negatives is 2
The number of false positives is 4
The number of false negatives is 0
The accuracy is 87.5%
The precision is 86.666666667%
The recall is 100.0%
The F1 score is 0.928571428571

```

Unused Model C: Unused Regression Model examining for the most salient factor in the finding of bad faith.

OLS Regression Results

```

=====
Dep. Variable:   Conclusion   R-squared:         0.385
Model:          OLS          Adj. R-squared:    -0.004
Method:         Least Squares F-statistic:       0.9896
Date:           Tue, 11 Apr 2017 Prob (F-statistic): 0.492
Time:           22:55:14     Log-Likelihood:    -7.5321
No. Observations: 32         AIC:              41.06
Df Residuals:   19          BIC:              60.12
Df Model:        12
Covariance Type: nonrobust

=====
                    coef    std err          t      P>|t|      [95.0% Conf. Int.]
-----
Intercept                0.6000      0.178       3.376     0.003       0.228     0.972
Panelist[T.Daniel Seng]  -0.6000      0.435     -1.378     0.184     -1.511     0.311
Panelist[T.Daren Tang Heng Shim] 0.4000      0.435       0.919     0.370     -0.511     1.311
Panelist[T.David Llewelyn]  -0.1000      0.332     -0.301     0.767     -0.796     0.596
Panelist[T.Jo-Ann See]       0.4000      0.435       0.919     0.370     -0.511     1.311
Panelist[T.Jonathan Kok]     0.4000      0.435       0.919     0.370     -0.511     1.311
Panelist[T.Joyce A Tan]      0.4000      0.267       1.501     0.150     -0.158     0.958
Panelist[T.Murgiana Haq]     0.4000      0.290       1.378     0.184     -0.207     1.007
Panelist[T.Ng-Loy Wee Loon]  0.4000      0.435       0.919     0.370     -0.511     1.311
Panelist[T.Phang Hsiao Chung] -0.1000      0.332     -0.301     0.767     -0.796     0.596
Panelist[T.Richard Tan]      0.4000      0.435       0.919     0.370     -0.511     1.311
Panelist[T.Stanley Lai SC]   0.4000      0.251       1.592     0.128     -0.126     0.926
Panelist[T.Tan Tee Jim SC]   0.2000      0.251       0.796     0.436     -0.326     0.726

=====
Omnibus:                 5.195   Durbin-Watson:           1.247
Prob(Omnibus):           0.074   Jarque-Bera (JB):         3.699
Skew:                    -0.784   Prob(JB):                 0.157
Kurtosis:                3.563   Cond. No.                 10.7

=====

```

Warnings:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

The number of true positives is 25

The number of true negatives is 2

The number of false positives is 4

The number of false negatives is 1

The accuracy is 84.375%

The precision is 86.2068965517%

The recall is 96.1538461538%

The F1 score is 0.909090909091

Unused Model D: Unused Regression Model examining if certain Panelists have a tendency towards awarding decisions for or against the Complainant. (Each Panellist is compared against Jim Lim) This regression does not show any bias but the other regression model was chosen for analysis instead based on Panellist type.

OLS Regression Results

```

=====
Dep. Variable:          Conclusion    R-squared:                0.594
Model:                  OLS          Adj. R-squared:           0.290
Method:                 Least Squares  F-statistic:              1.953
Date:                   Tue, 11 Apr 2017  Prob (F-statistic):       0.105
Time:                   22:55:14      Log-Likelihood:          -1.8620
No. Observations:       29           AIC:                     29.72
Df Residuals:           16           BIC:                     47.50
Df Model:                12
Covariance Type:        nonrobust
=====

```

	coef	std err	t	P> t	[95.0% Conf. Int.]	
Intercept	0.4826	0.125	3.864	0.001	0.218	0.747
Country_of_Respondent[T.China]	0.1388	0.183	0.758	0.459	-0.249	0.527
Country_of_Respondent[T.India]	0.2587	0.185	1.401	0.180	-0.133	0.650
Country_of_Respondent[T.Japan]	1.093e-15	0.491	2.22e-15	1.000	-1.041	1.041
Country_of_Respondent[T.Taiwan]	-0.9369	0.372	-2.517	0.023	-1.726	-0.148
Country_of_Complainant[T.China]	0.5174	0.369	1.401	0.180	-0.265	1.300
Country_of_Complainant[T.France]	0.5174	0.369	1.401	0.180	-0.265	1.300
Country_of_Complainant[T.Germany]	0.3785	0.402	0.942	0.360	-0.473	1.230
Country_of_Complainant[T.India]	0.2587	0.185	1.401	0.180	-0.133	0.650
Country_of_Complainant[T.Korea]	0.5174	0.369	1.401	0.180	-0.265	1.300
Country_of_Complainant[T.Luxembourg]	3.149e-16	2.89e-16	1.089	0.292	-2.98e-16	9.28e-16
Country_of_Complainant[T.Switzerland]	-0.4826	0.369	-1.307	0.210	-1.265	0.300
Country_of_Complainant[T.Turkey]	0.5174	0.369	1.401	0.180	-0.265	1.300
Country_of_Complainant[T.UK]	0.3785	0.402	0.942	0.360	-0.473	1.230
Country_of_Complainant[T.USA]	0.4543	0.172	2.636	0.018	0.089	0.820
=====						
Omnibus:	1.279	Durbin-Watson:		1.337		
Prob(Omnibus):	0.527	Jarque-Bera (JB):		0.338		
Skew:	0.039	Prob(JB):		0.845		
Kurtosis:	3.523	Cond. No.		4.28e+18		
=====						

Warnings:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
[2] The smallest eigenvalue is 2.1e-36. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.

Unused Model E: Regression Model examining if there is a trend with respect to the country of respondent or complainant (measured against respondents from Singapore and complainants from Singapore respectively). Model was not used given that each category does not have enough data points to make a meaningful analysis. Moving forward, categorizing into regions might provide a more useful analysis (i.e. South-East Asia, China, South Asia, European Countries, etc.)