

Determinants of the Strength of Auditing and Reporting Standards: A Cross-Country Study

Abstract

Our study fills the research gap regarding the absence of an empirical cross-country study on the determinants of the strength of auditing and reporting standards (SARS). Using data on 133 developing, developed and middle-income countries, we examine the role of environmental factors that influence a country's strength of auditing and reporting standards. Our empirical results confirm that institutional infrastructure, financial market development and higher education and training jointly influence a country's strength of auditing and reporting standards. We note that middle income and developed countries have similar determinants of SARS.

1. Introduction

The increased trend in internationalization of business and financial markets necessitates higher quality financial information produced in accordance with strong auditing and reporting standards. Prior research has shown that earnings quality is value-relevant. Firms with lower quality of earnings experience poorer future stock returns (Chan et al, 2001). Furthermore, poor earnings quality increases equity risk premium (Yee, 2006). Francis et al. (2005) shows that firms with lower quality earnings have higher costs of capital due to lower debt rating, larger realised costs of debt, and larger equity betas. Recent evidence shows that firms with more transparent earnings enjoy a lower cost of capital (Barth et al, 2010).

Extant work in international accounting argues that the strength of accounting quality is principally influenced by critical environmental factors such as economic forces, social forces, legal system, culture and political system (Briston, 1978; Nobes, 1983; Nobes, 1998; Douppnik and Salter, 1995). While several studies have examined the impact of firm level factors influencing the quality of accounting information produced by a typical firm, it has been recognised in extant research that country level factors are much more significant in explaining cross-country variations in earnings quality (Davis-Friday, 2010). This view is further reinforced by the work of Ball (1995) and Nobes (1998) who posit that accounting systems and the level of market transparency are functions of the characteristics of the legal systems and financing methods prevalent in a country. Rahman et al. (2010) provides recent evidence suggesting that institutional variables such as organisational structure, nature of debt, and regulations vary systematically between countries and that this variation explains financial reporting quality in international settings. Chen et al. (2010) investigate the relationship between accounting quality and international financial reporting standards in the European context and suggest that accounting standards play a role in improving the quality of reporting.

However, a remarkable research gap in this area is the absence of an empirical cross-country study on the determinants of the strength of auditing and reporting standards (SARS). Our study is designed to fill this significant lacuna.

We view SARS as an integral component of institutional transparency that is relevant for businesses, investors and governments. Several researchers such as Kurtzman et al. (2004) highlight the importance of institutional transparency and the risk that lack of transparency - opacity – entails. Kurtzman et al. (2004) posit that the degree of opacity in a country constitutes small-scale high frequency risk. The risk arising from opacity may impede commerce, affect portfolio and direct investment decisions, and influence the choice of outsource partner. Furthermore, the risk arising from lack of transparency is relevant to governments as they seek to progress economically by making their countries attractive to investment.

Our study is the first one to examine the determinants of the strength of auditing and reporting standards at the global level. We study the role of environmental factors that are expected to play a key role in affecting a country's strength of auditing and reporting standards. First, we analyse the role of institutional infrastructure in determining the SARS level in a given country. Second, we take into account the state of financial market development at the country level and examine its influence on strength of auditing and reporting standards. Finally, we consider the role of higher education and training in affecting the level of SARS in a given country.

We examine the strength of auditing and reporting standards in 133 countries using data sourced from the 2009-2010 Global Competitiveness Report published by the World Economic Forum. In addition to studying the influence of the environmental factors of the overall sample, we also examine subsamples classified on the basis of the stage of development of countries. Our empirical results confirm that institutional infrastructure,

financial market development and higher education and training all play significant roles in shaping a country's strength of auditing and reporting standards.

The rest of this paper is organised as follows. We present a review of prior research and develop our hypotheses in section 2. We describe our data and methodology in section 3. Our empirical results are presented and discussed in section 4. Our concluding remarks are contained in section 5.

2. Prior Research and Hypotheses Development

Our dependent variable is strength of auditing and reporting standards (SARS). SARS is a proxy for institutional transparency which is expected to have a major bearing on the quality of financial information produced by companies in a given country. As such, we propose to assess SARS at the country level and relate it to key environmental variables also measured at the country level. We posit that the degree of institutional transparency as proxied by SARS is influenced by three major factors. First, we believe that the orientation of institutional infrastructure will play a key role in determining the SARS level in a given country. Second, we consider the state of financial market development as a critical variable that influences the SARS level at the country level. Finally, the strength of higher education and training is expected to play a significant role in influencing the level of SARS in a given country.

Prior research has confirmed that **institutional infrastructure** plays a key role in influencing institutional transparency. Institutional infrastructure can be classified into two categories: public and private. El Ghouli et al. (2010) finds evidence indicating that legal environment plays a significant role in influencing audit quality, translating into an appreciably lower equity risk premium for clients of Big Four auditing firms. They use public enforcement as the proxy for the quality of legal enforcement. We therefore posit the following hypothesis:

H1: The level of efficiency of legal framework in a country is positively associated with the level of SARS ceteris paribus.

In addition to public institutions, private institutions also play a role in influencing institutional transparency. Corporate ethics and accountability are the underlying components of the strength of private institutional infrastructure. Wright (1996) presents the earliest empirical evidence indicating that the credibility of financial statement information is related to corporate governance features. He uses the composition of the board of directors to signify the quality of corporate governance. Imhoff (2003) suggests a number of measures to reform corporate governance of boards in order to improve financial reporting quality. Labelle et al. (2010) study whether the degree of ethical development of a corporation is related to the quality of its financial reporting. They use diversity management to proxy for ethical behaviour of the firm and earnings management to signify financial reporting quality. They hypothesise that firms promoting strong ethical behaviour in the conduct of its business operations incorporate the interests of all stakeholders instead of just the shareholders' interests will tend to have greater aversion to earnings management practices. Based on these past research findings, we conjecture put forward the following hypotheses:

H2: The level of ethical behaviour of firms in a country is associated with the level of SARS ceteris paribus.

H3: The level of efficacy of corporate boards of firms in a country is associated with the level of SARS ceteris paribus.

The state of financial market development is another key factor influencing institutional transparency. Adhikari and Tondkar (1992) conduct a cross-country study of disclosure, investigating the role of environmental factors. They confirm, empirically, that the size of equity market explains the variation in disclosure levels. El Ghouli et al. (2010) find that firms located in countries with large and vibrant stock markets are associated with

higher demand for accounting transparency. Based on prior research, we conjecture that financial market sophistication should influence the strength of auditing and reporting standards in a country. Furthermore, countries in which financing through local equity market is predominant should have higher quality of auditing and reporting standards, other things being equal. Also, stock market regulation is another factor which is expected to influence SARS.

Based on the above discussion, we formally state the following hypotheses:

H4: The level of financial market sophistication in a country is associated with the level of SARS ceteris paribus.

H5: The level of financing through local equity markets in a country is associated with the level of SARS ceteris paribus.

H6: The quality of stock market regulations in a country is associated with the level of SARS ceteris paribus.

It has been established in prior research that there is a positive relationship between the level of education and the competence of professional accountants (Gernon et al. 1987). Arguably, the quantity and quality of higher education and training obtaining in a country should have an influence on SARS. A high level of education and training, competence and expertise are required to be able to understand, interpret and maintain a high standard of auditing and reporting. We therefore posit the following hypothesis:

H7: The level of higher education and training in a country is associated with the level of SARS ceteris paribus.

In addition to the quantity and quality of skills in a country it is also likely that efficient use of talent is a prerequisite for maintaining a high level of auditing and reporting standards. We thus have the following hypothesis that formalises our conjecture:

H8: The level of efficiency of usage of talent in a country is associated with the level of SARS ceteris paribus.

3. Data and Methodology

Data for this study are drawn from the Global Competitiveness Report (2009) of the World Economic Forum (WEF, 2010). This data source is both reliable and comprehensive and used by many researchers in social science. The WEF draws its data from international hard data sources and Executive Opinion Survey. The survey is considered as unique tool for capturing timely and vital information related to the business environment in which business executives operate and therefore provide a unique source of the competitiveness of an economy. The survey addresses 12 pillars of the Global Competitiveness Index. Responses to the survey questions are assessed on a 7-point Likert scale, where 1 represents the lowest possible score and 7 the highest possible score. The data from the survey gives a comparative qualitative picture of the economic and business environment of each country. Our choice of WEF data is driven by our motivation to maximise the sample size. Other data sources cover lesser number of countries and therefore would preclude stronger statistical tests.

The hard data are basically quantitative data collected from a variety of sources. WEF uses the most recent data available from international organisations such as World Bank, United Nations etc. A more detailed description of the hard data is found in the Technical Notes of the WEF report, 2009. For this study, we are using ten variables from the twelve pillars for global competitiveness index to assess their effects on the strength of auditing and reporting at a global level.

We describe below the variables used in this study:

SARS: Strength of auditing and reporting standards refers to the strength of financial auditing and reporting standards in a given country compared to other countries in the sample. This is our dependent variable.

EBOF: Ethical behaviour of firms compares corporate ethics (ethical behaviour in interactions with public officials, politicians, and other enterprises) of firms in one country with firms of other countries in the world.

EOLFW: Efficiency of legal framework in challenging regulations refers to how efficient the legal framework for private businesses is in challenging the legality of government actions and/or regulations.

EOCB: Efficacy of corporate boards refers to the characteristics of corporate governance based on corporate governance pertaining to boards of directors in a country.

HET: Higher education and tertiary enrolment refers to the gross tertiary education enrolment rate in a country (hard data).

FMS: Financial market sophistication refers to how sophisticated the financial market is in a country.

LEMF: Financing through local equity market refers to the ease with which money is raised by issuing shares on the stock market in a country.

SER: Securities exchange regulations refers to the assessment of regulation of securities exchange of a country.

ROPM: Reliance on professional management is measured through surveys and is use as indicator of efficient use of talent.

WEF uses the following standard formula for converting hard data:

$$6 \times \frac{(\text{country score} - \text{sample minimum})}{(\text{sample maximum} - \text{sample minimum})} + 1$$

The sample minimum and sample maximum are, respectively, the lowest and highest country scores in the sample of countries covered by the GCI. In some instances, adjustments were made to account for extreme outliers. Based on the scores all countries in the sample (128) are ranked on that particular variable. We use the ranks in our tests.

The descriptive statistics of all the variables used in our study are displayed in Table 1. We conduct unit root tests using Augmented Dicky Fuller (ADF) and Phillips-Perron tests and report the results in Table 2. The data do not indicate serious problems of unit roots in the level of the variables. We conduct multivariate tests to examine the statistical validity of the several hypotheses developed in section 2. These are reported in the following section.

4. Empirical Results

In order to empirically examine the validity of our different hypotheses, we conduct country-level regressions. We regress the ranks of SARS on the ranks of the various independent variables described in the previous section. We control for first order autocorrelation in the dependent variable using an AR (1) term. The multivariate regression results for our entire sample of 128 countries are provided in Table 3.

For the overall sample, three of the variables are statistically significant at conventional levels. The adjusted R^2 of the model is 89%. They are EBOF, FMS, and SER. EBOF is significant at less than 1% level and supports hypothesis 2 which states that the level of ethical behaviour of firms in a country influences its strength of auditing and reporting standards. FMS is also significant at less than 1% level. This result empirically supports hypothesis 4 which posits that financial market sophistication is associated with a country's strength of auditing and reporting standards. Hypothesis 6 is also supported by data since SER is significant at less than 1% level. Thus we can conclude that the quality of stock exchange regulations in a country affects the strength of auditing and reporting standards.

Overall, our empirical results support hypotheses H2, H4 and H6. These results confirm that the institutional infrastructure and financial market development play a dominant role in determining a country's strength of auditing and reporting standards. The strength of higher education and training does not seem to play a role.

Prior research has shown that the level of economic development influences the quality of accounting prevalent in a country. However, past research has also shown that economic development is also strongly correlated with a number of institutional variables. In order to clearly discern the moderating role of economic development on the relationships between our independent variables and the strength of auditing and reporting standards, we split our sample into three groups based on the stage of economic development. WEF categorises countries into three stages based on its per capita GDP. Countries with GDP less than USD 2,000 per capita are **factor driven** economies and labelled as Stage 1 countries. Countries with per capita income levels between USD 3,000 and 9,000 are characterised as **efficiency driven** economies and fall into Stage 2 category. Countries with income levels exceeding USD 17,000 on a per capita basis are Stage 3 countries and are characterised as **innovation driven**. Ostensibly, the stage of development is expected to exert a moderating influence on the role of critical institutional, financial developmental and educational variables in affecting the strength of auditing and reporting standards. We therefore partition our sample into three groups and rerun our multivariate regression tests. These results are contained in tables 4 to 6. We include countries in a state of transition at the lower level of development.

Table 4 contains our multivariate regression results for the subsample of Stage 1 countries. Our model explains about 85% of the variation in the strength of auditing and reporting standards. EBOF, FMS and ROPM are statistically significant at conventional levels. Hypotheses H2, H4 and H8 are empirically supported. EBOF is significant at less than 1% level and validates hypothesis 2 which states that the level of ethical behaviour of

firms in a country influences its strength of auditing and reporting standards. FMS is also significant at less than 1% level. This result empirically corroborates hypothesis 4 which posits that financial market sophistication is associated with a country's strength of auditing and reporting standards. In addition to these variables, ROPM is also statistically significant at less than 1% level. Reliance on Professional Management which is one of the indicators denoting efficient use of talent positively influences the strength of auditing and reporting standards in a developing country. Hypothesis 8 is thus empirically confirmed.

These results confirm that institutional infrastructure, financial market development and higher education and training all play significant roles in shaping a developing country's strength of auditing and reporting standards.

We report our multivariate regression results for the subsample of Stage 2 countries in Table 5. Our model explains about 83% of the variation in the strength of auditing and reporting standards. EOLFW, and SER are statistically significant. Hypotheses H1 and H6 are empirically supported. EOLFW is significant at 1% level and confirms hypothesis 1 which posits that the level of efficiency of legal framework in a country is associated with the strength of auditing and reporting standards. SER is significant at the 10% level. This result weakly supports hypothesis 6 which states that the quality of stock market regulations in a country is associated with the strength of its auditing and reporting standards. These results confirm that institutional infrastructure and financial market development explain significantly a middle-income country's strength of auditing and reporting standards.

We conduct multivariate regression tests for the developed countries belonging to Stage 3 and report our results in Table 6. Our model explains about 87% of the variation in the strength of auditing and reporting standards. As in the case of stage 2 countries, EOLFW, and SER are statistically significant. Hypotheses H1 and H6 are empirically supported. EOLFW is significant at less than 1% level and confirms hypothesis 1 which posits that the level of

efficiency of legal framework in a country is associated with the strength of auditing and reporting standards. SER is significant at the 5% level. This result supports hypothesis 6 which states that the quality of stock market regulations in a country is associated with the strength of its auditing and reporting standards. These results substantiate our assertion that institutional infrastructure and financial market development explain significantly a developed country's strength of auditing and reporting standards.

We summarise our principal findings in Table 7. Overall, we find strong support for hypotheses H1, H2, H4, H6 and weak support for H8. There is no empirical support for hypotheses H3, H5 and H7. We confirm that institutional infrastructure, financial market development and higher education and training influence a country's strength of auditing and reporting standards. However, the role of higher education and training is limited to developing countries. Middle income and developed countries behave in a similar manner with respect to the variables that are statistically significant. Efficiency of legal framework and stock exchange regulations are significant factors in affecting the strength of auditing and reporting standards in these countries. In the case of developing countries, ethical behaviour of firms, financial market sophistication and reliance on professional management are significant factors.

5. Conclusion

Our study is the first one to examine the determinants of the strength of auditing and reporting standards at the global level. We consider SARS as a vital element of institutional transparency that is crucial for businesses, investors and governments. We focus on the role of environmental factors in affecting a country's strength of auditing and reporting standards. Our empirical work is based on data collected on 133 countries from the 2009-2010 Global Competitiveness Report published by the World Economic Forum. We confirm empirically

that institutional infrastructure, financial market development and higher education and training all jointly influence a country's strength of auditing and reporting standards.

In order to examine the moderating role of economic development on the relationships between our independent variables and the strength of auditing and reporting standards, we split our sample into three groups based on the stage of economic development. Our subsample results provide a number of additional insights. First, while institutional infrastructure and financial development are relevant for countries in every stage of development, higher education and training is relevant only for developing countries. Second, middle income and developed countries show similar results with respect to the variables that are statistically significant. Efficiency of legal framework and stock exchange regulations are significant factors influencing the strength of auditing and reporting standards in middle income countries. Ethical behaviour of firms, financial market sophistication and reliance on professional management are significant factors affecting SARS in developing countries.

References

- Adhikari, A., and R.H. Tondkar. 1992. Environmental Factors Influencing Accounting Disclosure Requirements of Global Stock Exchanges. *Journal of International Financial Management and Accounting* 4: 75-105.
- Ball, R. 1995. Making Accounting more international: Why, how, and how far will it go? *Journal of Applied Corporate Finance* 8: 19-29.
- Barth, M., Y. Konchitchki, and W.R. Landsman. 2010. Cost of Capital and Earnings Transparency. Stanford University Working Paper.
- Briston, R.J. 1978. The Evolution of Accounting in Developing Countries. *International Journal of Accounting* 13: 18-30.
- Chan, K., L.K.C. Chan, N. Jegadeesh, and J. Lakonishok. 2001. Earnings Quality and Stock Returns: The Evidence from Accruals, NBER Working Paper.
- Chen, H., Q. Tang, Y. Jiang and Z. Lin. 2010. The role of IFRS in accounting quality: Evidence from EU, *Journal of International Financial Management & Accounting*, 21: 220- 277.
- Davis-Friday, P.Y. 2010. Discussion of “Financial reporting quality in international settings: A comparative study of the U.S.A, Japan, Thailand, France and Germany” *International Journal of Accounting* 45: 35-38.
- Doupnik, T., and S. Salter. 1995. External environment, culture, and accounting practice: A preliminary test of a general model of international accounting development. *International Journal of Accounting* 30: 189-202.
- El Ghoul, S., O. Guedhami, and J. Pittman. 2010. Cross-Country Evidence on the Importance of Big Four Auditors to equity Pricing: The Mediating Role of Legal Institutions. University of Alberta Working Paper.
- Francis, J., R. LaFond, P. Olsson, and K. Schipper. 2005. The market pricing of accruals quality. *Journal of Accounting and Economics* 39: 295-327.
- Gernon, H., G. Meek, and G. Mueller. 1987. Accounting: An International Perspective Homewood, Il: Irwin.
- Imhoff, E.A. 2003. Accounting Quality, Auditing, and Corporate Governance. Accounting Horizons. Supplement: 117-128.
- Kurtzman, J., G. Yago, and T. Phumiwasana. 2004. The Global Costs of Opacity. MIT Sloan Management Review 46: 38-44.

- Nobes, C.W. 1983. A Judgmental International Classification of Financial Reporting Practices. *Journal of Business Finance and Accounting* 10: 1-19.
- Nobes, C.W. 1998. Towards a General Model of the Reasons for International Differences in Financial Reporting. *Abacus* 34: 162-187.
- Rahman, A., J. Yammeesri, and H. Perera. 2010. Financial reporting quality in international settings: A comparative study of the U.S.A, Japan, Thailand, France and Germany” *International Journal of Accounting* 45: 1-34.
- WEF. 2010. The Global Competitiveness Report 2009-2010. World Economic Forum. Geneva, Switzerland.
- Wright, D.W. 1996. Evidence on the relation between corporate governance characteristics and the quality of financial reporting. Working Paper.
- Yee, K.K. 2006. Earnings Quality and the Equity Risk Premium: A Benchmark Model. *Contemporary Accounting Research* 23: 833-877.

Table 1: Descriptive Statistics of Variables

Statistical measures	Variables								
	EBOF	EOCB	EOLFW	FMS	HET	LEMF	ROPM	SARS	SER
Mean	65.62	66.27	66.55	65.40	72.17	66.18	66.00	65.99	66.26
Median	65.00	65.50	64.50	64.50	76.50	65.50	65.50	65.50	65.50
Maximum	133.00	133.00	133.00	133.00	130.00	133.00	133.00	133.00	133.00
Minimum	1.00	1.00	1.00	1.00	5.00	1.00	1.00	1.00	1.00
Std. Dev.	38.36	38.66	39.08	38.23	35.186	38.58	38.52	38.48	38.59
Skewness	0.03	0.01	0.02	0.05	-0.35	0.01	0.01	0.02	0.01
Kurtosis	1.78	1.78	1.74	1.82	2.03	1.78	1.76	1.81	1.77

Notes: The descriptive statistics presented above is based on a sample of size 133. SARS (strength of auditing and reporting) is the dependent variable. EBOF (ethical behaviour of firms), EOLFW (Efficiency of legal framework), EOCB (efficacy of corporate boards), HET (higher education and training), FMS (financial market sophistication), LEMF (financing through local equity market), SER (securities exchange regulations) and ROPM (reliance on professional management) are the independent variables.

Table 2: Unit Root Tests on Level of Variables

Variables	Tests	t-Statistic
SARS	ADF	-3.9878***
	PP	-6.9670***
EBOF	ADF	-2.6503
	PP	-6.6725***
EOLFW	ADF	-8.3379***
	PP	-9.1093***
EOCB	ADF	-8.6215***
	PP	-9.4448***
HET	ADF	-1.7101
	PP	-5.0961***
FMS	ADF	-2.4408
	PP	-6.9663***
LEMF	ADF	-9.7952***
	PP	-10.0166***
SER	ADF	-4.6472***
	PP	-7.744***
ROPM	ADF	-2.5435
	PP	-8.9376***

Notes: SARS (strength of auditing and reporting), EBOF (ethical behaviour of firms), EOLFW (Efficiency of legal framework), EOCB (efficacy of corporate boards), HET (higher education and training), FMS (financial market sophistication), LEMF (financing through local equity market), SER (securities exchange regulations) and ROPM (reliance on professional management) are the variables used in the study. The critical values for the ADF and PP tests are -3.48, -2.88 and -2.57 at the 1%, 5% and 10% level of significance, respectively. Further 1%, 5% and 10% level of significance are represented by ***, ** and *, respectively.

Table 3: Multivariate Regression Results for Whole Sample

		Coefficient	P-value	R ²	DW statistic for AR(1)
Constant		-3.190771	0.2773	0.890196	1.999354
Variables	EBOF	0.190084	0.0098		
	EOLFW	0.097582	0.1101		
	EOCB	0.072207	0.2995		
	HET	0.076842	0.2609		
	FMS	0.249488	0.0013		
	LEMF	-0.019839	0.6859		
	SER	0.250770	0.0016		
	ROPM	0.122963	0.1442		

Notes: See notes of Table 1 for further details of variables. The regression results are based on a sample size of 133.

Table 4: Multivariate Regression Results Using the Sample of Stage 1 Countries

		Coefficient	P-value	R ²	DW statistic for AR(1)
Constant		-0.738798	0.9293	0.848006	2.066405
Variables	EBOF	0.288619	0.0031		
	EOLFW	-0.003413	0.9649		
	EOCB	0.028716	0.7945		
	HET	-0.067459	0.6331		
	FMS	0.478924	0.0027		
	LEMF	0.056722	0.4370		
	SER	-0.110949	0.4732		
	ROPM	0.366183	0.0057		

Notes: See notes of Table 1 for further details of variables. The regression test is conducted for a sample of size 56.

Table 5: Multivariate Regression Results Using the Sample of Stage 2 Countries					
		Coefficient	P-value	R ²	DW statistic for AR(1)
Constant		-3.405500	0.7613	0.829217	1.957285
Variables	EBOF	-0.065665	0.6834		
	EOLFW	0.438597	0.0106		
	EOCB	0.192098	0.1470		
	HET	0.170798	0.3247		
	FMS	0.194326	0.2219		
	LEMF	-0.083357	0.4863		
	SER	0.240960	0.0899		
	ROPM	-0.102820	0.5489		
Notes: See notes of Table 1 for further details of variables. The regression test is conducted for a sample of size 40.					

Table 6: Multivariate Regression Results Using the Sample of Stage 3 Countries					
		Coefficient	P-value	R ²	DW statistic for AR(1)
Constant		1.806494	0.6702	0.868598	1.909828
Variables	EBOF	-0.223567	0.1608		
	EOLFW	0.401316	0.0021		
	EOCB	-0.065861	0.7020		
	HET	0.050259	0.7637		
	FMS	0.027671	0.8502		
	LEMF	-0.035711	0.6533		
	SER	0.392858	0.0175		
	ROPM	0.263527	0.2101		
Notes: See notes of Table 1 for further details of variables. The regression test is conducted for a sample of size 37.					

Table 7: Summary of Empirical Results

Hypothesis	Whole Sample	Stage 1 Countries	Stage 2 Countries	Stage 3 Countries
H1			✓	✓
H2	✓	✓		
H3				
H4	✓	✓		
H5				
H6	✓		✓	✓
H7				
H8		✓		